



AF

Sequence Listing

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Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Kljavin, Ivar J.
Napier, Mary A.
Pan, James
Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
Tumas, Daniel
Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
Zhang, Zemin

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<211> 251

<212> PRT

<213> Homo sapiens

<400> 6

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Arg	Tyr	Trp	Phe	Ala	Ala	Thr	Val	Ala	Val	Pro	Leu	Val	Gly	Lys		20	25	30	
Leu	Gly	Leu	Ile	Ser	Pro	Ala	Tyr	Leu	Phe	Leu	Trp	Pro	Glu	Ala		35	40	45	
Phe	Leu	Tyr	Arg	Phe	Gln	Ile	Trp	Arg	Pro	Ile	Thr	Ala	Thr	Phe		50	55	60	
Tyr	Phe	Pro	Val	Gly	Pro	Gly	Thr	Gly	Phe	Leu	Tyr	Leu	Val	Asn		65	70	75	
Leu	Tyr	Phe	Leu	Tyr	Gln	Tyr	Ser	Thr	Arg	Leu	Glu	Thr	Gly	Ala		80	85	90	
Phe	Asp	Gly	Arg	Pro	Ala	Asp	Tyr	Leu	Phe	Met	Leu	Leu	Phe	Asn		95	100	105	
Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu		110	115	120	
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln		125	130	135	
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe		140	145	150	
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile		155	160	165	
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly		170	175	180	
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly		185	190	195	
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu		200	205	210	
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala		215	220	225	
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His		230	235	240	
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<210> 7

<211> 1373

<212> DNA

<213> Homo sapiens

<400> 7

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 gtccggcgggt ctggcctagg gatcttcccc gttgccccct tggggcggga 200
 tggctgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250
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 gccagagcc ggtgattttg gtggcctgtg ttccccctgt ttttgatgat 400
 gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaga 450
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 ggaaatgaca gagaaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
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<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8

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				20					25					30	
Asp	Phe	Val	Glu	Gln	Lys	Cys	Glu	Val	Asn	Cys	Lys	Gly	Gly	His	
				35					40					45	
Val	Ile	Thr	Pro	Gly	Ser	Pro	Glu	Pro	Val	Ile	Leu	Val	Ala	Cys	
				50					55					60	
Val	Pro	Leu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu	Thr	Tyr	
				65					70					75	
Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu	Leu	
				80					85					90	
Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe	Gln	
				95					100					105	
Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln	Ala	
				110					115					120	
Ile	Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe	Lys	
				125					130					135	
Ala	Met	Met	Val	Gln	Lys	Asn	Ile	Glu	Met	Gln	Leu	Gln	Ala	Ile	
				140					145					150	
Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	
				155					160					165	
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	
				170					175					180	
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	
				185					190					195	
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	
				200					205					210	
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	
				215					220					225	
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	
				230					235					240	
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	
				245					250					255	
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	
				260					265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	
				275					280					285	

Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr
				290					295					300
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met
				305					310					315
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr
				320					325					330
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu
				335					340					345
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu
				350					355					360
Lys	Glu	Glu	Val	Ile	Asn	Lys								
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<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

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 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
 tgcacttctc ctcttgcaaa gacccataca tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300
 tgggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
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<210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
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<210> 11
 <211> 23
 <212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 11
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<210> 12
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<210> 13
<211> 2886
<212> DNA
<213> Homo sapiens

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cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200
acagtgctgt agtcatctcg taatatgctc cttgtcaaca atgtatacat 250
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<210> 14
 <211> 424
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu
 50 55 60
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys
 65 70 75
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu
 80 85 90
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe
 95 100 105
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro
 110 115 120
 Ala Met Ala Val Ile Phe Ser Asn Phe Ser Ile Ile Thr Thr Ala
 125 130 135
 Leu Leu Phe Arg Ile Val Leu Lys Arg Arg Leu Asn Trp Ile Gln
 140 145 150

Trp	Ala	Ser	Leu	Leu	Thr	Leu	Phe	Leu	Ser	Ile	Val	Ala	Leu	Thr	
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Ala	Gly	Thr	Lys	Thr	Leu	Gln	His	Asn	Leu	Ala	Gly	Arg	Gly	Phe	
				170					175					180	
His	His	Asp	Ala	Phe	Phe	Ser	Pro	Ser	Asn	Ser	Cys	Leu	Leu	Phe	
				185					190					195	
Arg	Ser	Glu	Cys	Pro	Arg	Lys	Asp	Asn	Cys	Thr	Ala	Lys	Glu	Trp	
				200					205					210	
Thr	Phe	Pro	Glu	Ala	Lys	Trp	Asn	Thr	Thr	Ala	Arg	Val	Phe	Ser	
				215					220					225	
His	Ile	Arg	Leu	Gly	Met	Gly	His	Val	Leu	Ile	Ile	Val	Gln	Cys	
				230					235					240	
Phe	Ile	Ser	Ser	Met	Ala	Asn	Ile	Tyr	Asn	Glu	Lys	Ile	Leu	Lys	
				245					250					255	
Glu	Gly	Asn	Gln	Leu	Thr	Glu	Ser	Ile	Phe	Ile	Gln	Asn	Ser	Lys	
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Leu	Tyr	Phe	Phe	Gly	Ile	Leu	Phe	Asn	Gly	Leu	Thr	Leu	Gly	Leu	
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Gln	Arg	Ser	Asn	Arg	Asp	Gln	Ile	Lys	Asn	Cys	Gly	Phe	Phe	Tyr	
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Gly	His	Ser	Ala	Phe	Ser	Val	Ala	Leu	Ile	Phe	Val	Thr	Ala	Phe	
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Gln	Gly	Leu	Ser	Val	Ala	Phe	Ile	Leu	Lys	Phe	Leu	Asp	Asn	Met	
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Phe	His	Val	Leu	Met	Ala	Gln	Val	Thr	Thr	Val	Ile	Ile	Thr	Thr	
				335					340					345	
Val	Ser	Val	Leu	Val	Phe	Asp	Phe	Arg	Pro	Ser	Leu	Glu	Phe	Phe	
				350					355					360	
Leu	Glu	Ala	Pro	Ser	Val	Leu	Leu	Ser	Ile	Phe	Ile	Tyr	Asn	Ala	
				365					370					375	
Ser	Lys	Pro	Gln	Val	Pro	Glu	Tyr	Ala	Pro	Arg	Gln	Glu	Arg	Ile	
				380					385					390	
Arg	Asp	Leu	Ser	Gly	Asn	Leu	Trp	Glu	Arg	Ser	Ser	Gly	Asp	Gly	
				395					400					405	
Glu	Glu	Leu	Glu	Arg	Leu	Thr	Lys	Pro	Lys	Ser	Asp	Glu	Ser	Asp	
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<210> 15

<211> 755
<212> DNA
<213> Homo sapiens

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tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 200
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cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
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cagccatggc tggtatcttc tcaaatttta gcattataac aacagctctt 650
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<210> 16
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<213> Artificial Sequence

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<210> 17
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<220>
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<400> 17
tcagagaatt ccttccagga 20

<210> 18
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

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<210> 19
<211> 2142
<212> DNA
<213> Homo sapiens

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<210> 20

<211> 458

<212> PRT

<213> Homo sapiens

<400> 20

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Trp	Ala	Glu	Pro	Gly	Met	Pro	Ser	Gln	Thr	Pro	Trp	Trp	Ala	Ser
				20					25					30

Ala	Ser	Ala	Asn	Pro	Pro	Gly	Pro	Ala	Trp	Val	Ala	Leu	Cys	Pro
			35						40					45

Gly	Ser	Ser	Ser	Pro	Arg	Pro	Trp	Pro	Ser	Leu	Pro	Thr	Ser	Ser		50	55	60
Ser	Gly	Ser	Cys	Pro	Thr	Ser	His	Thr	Ala	Arg	Pro	Ile	Gly	Thr		65	70	75
Cys	Phe	Ser	Ile	Ala	Ser	Leu	Lys	Gln	Trp	Ser	Arg	Val	Ser	Met		80	85	90
Phe	Pro	Thr	Arg	Leu	Ser	Pro	Cys	Ser	Ser	Ala	Thr	Glu	Gln	Thr		95	100	105
Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu		110	115	120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln		125	130	135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala		140	145	150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu		155	160	165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile		170	175	180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln		185	190	195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe		200	205	210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu		215	220	225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu		230	235	240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn		245	250	255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu		260	265	270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys		275	280	285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile		290	295	300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val		305	310	315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro		320	325	330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln				

335	340	345
Pro His Phe His Gly Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val		
350	355	360
Phe Phe Thr Lys Phe Ala Ser Gly Val Ser Leu Gly Ile Ser Thr		
365	370	375
Leu Ser Leu Asp Phe Ala Gly Tyr Gln Thr Arg Gly Cys Ser Gln		
380	385	390
Pro Glu Arg Val Lys Phe Thr Leu Asn Met Leu Val Thr Met Ala		
395	400	405
Pro Ile Val Leu Ile Leu Leu Gly Leu Leu Leu Phe Lys Met Tyr		
410	415	420
Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln		
425	430	435
Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp		
440	445	450
Ser Thr Glu Leu Ala Ser Ile Leu		
455		

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

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 cggtttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
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<210> 22
 <211> 1173

<212> DNA
<213> Homo sapiens

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aaacagaaaa cctgttagaa atgtggtggg ttcagcaagg cctcagtttc 150
cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
cattactgca gtaacactcc accatataga ccgggttta ccttatatca 250
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400
ctggccttgt acttgaata ctgagttggt taggactttc tattgtggca 450
aacttcocaga aaacaacct ttttgctgca catgtaagtg gagctgtgct 500
tacctttggg atgggctcat tatatatggt tgttcagacc atcctttcct 550
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gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
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gaaaataaag tcaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23

Met	Trp	Trp	Phe	Gln	Gln	Gly	Leu	Ser	Phe	Leu	Pro	Ser	Ala	Leu	1	5	10	15
Val	Ile	Trp	Thr	Ser	Ala	Ala	Phe	Ile	Phe	Ser	Tyr	Ile	Thr	Ala	20	25	30	
Val	Thr	Leu	His	His	Ile	Asp	Pro	Ala	Leu	Pro	Tyr	Ile	Ser	Asp	35	40	45	
Thr	Gly	Thr	Val	Ala	Pro	Glu	Lys	Cys	Leu	Phe	Gly	Ala	Met	Leu	50	55	60	
Asn	Ile	Ala	Ala	Val	Leu	Cys	Ile	Ala	Thr	Ile	Tyr	Val	Arg	Tyr	65	70	75	
Lys	Gln	Val	His	Ala	Leu	Ser	Pro	Glu	Glu	Asn	Val	Ile	Ile	Lys	80	85	90	
Leu	Asn	Lys	Ala	Gly	Leu	Val	Leu	Gly	Ile	Leu	Ser	Cys	Leu	Gly	95	100	105	
Leu	Ser	Ile	Val	Ala	Asn	Phe	Gln	Lys	Thr	Thr	Leu	Phe	Ala	Ala	110	115	120	
His	Val	Ser	Gly	Ala	Val	Leu	Thr	Phe	Gly	Met	Gly	Ser	Leu	Tyr	125	130	135	
Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile	140	145	150	
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp	155	160	165	
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu	170	175	180	
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp	185	190	195	
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala	200	205	210	
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr	215	220	225	
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn	230	235	240	
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn	245	250	255	
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 <211> 485
 <212> DNA
 <213> Homo sapiens

<220>
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<222> 14, 484
<223> unknown base

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gagcggagat cctcaaacgg cctagtgttt cgcgcttccg gagaaaatca 150
gcgggtctaataaattcctct ggtttgttga agcagttacc aagaatcttc 200
aacccctttcc cacaaaagct aattgagtag acgttctctgt tgagtacacg 250
ttctgtttga ttacaaaag gtgcaggtat gagcaggtct gaagactaac 300
atattgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtgggtttca 350
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gctttacctt atatcagtag cactggtaca gtanc 485

<210> 25
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtgg ttccagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat ggggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

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 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28
 <211> 264
 <212> PRT
 <213> Homo sapiens

 <400> 28

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Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	
Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu	215	220	225	
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys	230	235	240	
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala	245	250	255	
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr	260									

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
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 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
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<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens


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<400> 30
Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser
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Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met
              20              25              30

Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
              35              40              45

Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
              50              55              60

Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
              65              70              75

Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
              80              85              90

Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
              95              100             105

Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
              110             115             120

Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
              125             130             135

Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
              140             145             150

Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
              155             160             165

Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
              170             175             180

Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
              185             190             195

Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
              200             205             210

Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
              215             220             225

Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
              230             235             240

Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
              245             250             255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
              260             265             270

Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
              275             280             285

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Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
				335					340					345

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
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 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cacgtgggtt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300
 aaaatttata agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400
 ttaatcttgc tcaactgcta ctttgtgatt caacctttca gccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacgcgtc cgcacacgcg tccggctgaa cacctcttct ttggagtcag 50
 ccaactgatga ggcagggtcc ccaactgcag ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgcctatgag ccgctggggc tgcagtgggg actgccctcc ctgccacca 200
 ccaatggcag cccaccttc tttgaagact tccaggcttt ttgtgccaca 250
 cccgaatggc gccacttcac cgacaaacag gtacagccaa ccatgtccca 300

gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350
 ggaatgcttg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400
 gagcgcgccc agagtctgctg ggcccttcag gagctggtgc tggaacctgc 450
 gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500
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 cgagtgccag ctggtgacgg tagtgccgt ggtcccagg ctgctggagg 950
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 gacttcatcc agcagcaccg ccaggctctg gagtcggagt atgtgtctgc 1950
 acacctacac gagtggatcg acctcatctt tggctacaag cagcgggggc 2000
 cagccgccga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050
 gctgtagacc tggaccatgt gacagatgag cgggaacgga aggctctgga 2100
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 ccgggaggcc ccgccagaa gtcggcgga acaccccggt gtgggcagcc 3400
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 ggggcgccc tgaggccag cactggcgtc t 3531

<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
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 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
 20 25 30
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
 35 40 45
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
 50 55 60
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
 65 70 75
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
 80 85 90
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
 95 100 105
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
 110 115 120
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
 125 130 135
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
 140 145 150
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
 155 160 165
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
 170 175 180
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
 185 190 195

Arg	Glu	Lys	Leu	Val	Leu	Ser	Ala	Glu	Cys	Gln	Leu	Val	Thr	Val	
				200					205					210	
Val	Ala	Val	Val	Pro	Gly	Leu	Leu	Glu	Val	Thr	Thr	Gln	Asn	Val	
				215					220					225	
Tyr	Phe	Tyr	Asp	Gly	Ser	Thr	Glu	Arg	Val	Glu	Thr	Glu	Glu	Gly	
				230					235					240	
Ile	Gly	Tyr	Asp	Phe	Arg	Arg	Pro	Leu	Ala	Gln	Leu	Arg	Glu	Val	
				245					250					255	
His	Leu	Arg	Arg	Phe	Asn	Leu	Arg	Arg	Ser	Ala	Leu	Glu	Leu	Phe	
				260					265					270	
Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	
				275					280					285	
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	
				290					295					300	
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
				305					310					315	
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
				320					325					330	
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	

485										490					495				
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly					
				500					505					510					
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp					
				515					520					525					
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln					
				530					535					540					
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu					
				545					550					555					
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro					
				560					565					570					
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu					
				575					580					585					
Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys					
				590					595					600					
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln					
				605					610					615					
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala					
				620					625					630					
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe					
				635					640					645					
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val					
				650					655					660					
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp					
				665					670					675					
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met					
				680					685					690					
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro					
				695					700					705					
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly					
				710					715					720					
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val					
				725					730					735					
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His					
				740					745					750					
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr					
				755					760					765					
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu					
				770					775					780					

Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	
Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln	
				905					910					915	
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala	
				920					925					930	
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr	
				935					940					945	
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu	
				950					955					960	
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln	
				965					970					975	
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val	
				980					985					990	
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg			
				995					1000						

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA
<213> Homo sapiens

<400> 35
cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50
atcatgcaac cccacggccc accttgtgaa ctctctgtgc ccagggctga 100
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ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
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gccttcatcc gcacactccg ttaccacact gggtcattgg catttgagc 350
ctcctcctg accttctgtc agatagcccc ggtcatcttg gagtatattg 400
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tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
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gaggcaggag aatcgcttga acccgaggag cagaggttgc agtgagccga 1300
gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350

aaacaaacaa acaaaaagat tttattaaag atattttggt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile					
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Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys					
				20					25					30					
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu					
				35					40					45					
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly					
				50					55					60					
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val					
				65					70					75					
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro					
				80					85					90					
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr					
				95					100					105					
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu					
				110					115					120					
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His					
				125					130					135					
Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys					
				140					145					150					
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe					
				155					160					165					
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn					
				170					175					180					
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn					
				185					190					195					
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu					
				200					205					210					
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser					
				215					220					225					
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe					
				230					235					240					
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser					
				245					250					255					

Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe
 260 265 270
 Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu
 275 280 285
 Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys
 290 295 300
 Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp
 305 310 315
 Asn Lys Lys Arg Lys Lys
 320

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 tcgtgcccag gggctgatgt gc 22

<210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 gtctttaccc agccccggga tgcg 24

<210> 39
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 39
 ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggctctggg 50

<210> 40
 <211> 1365
 <212> DNA
 <213> Homo sapiens

<400> 40
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 tccggccgcc gtggctatgt tcgtgtccga tttccgcaaa gagttctacg 100

aggtggtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150
 gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
 gcaatatacg ctggttccag tttctgggtg gcaagaactt gaaactgcat 250
 ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300
 gctaattgtag acctattgga tattcttcaa cctgatgaag acactatatt 350
 ctttgtgtgt gactcccata ggccagtcaa tgtcgtcaat gtatacaacg 400
 ataccagat caaattactc attaaacaag atgatgacct tgaagttccc 450
 gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
 aatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
 aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtgggag 600
 gcccgagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
 gacatcgtca gccatggtga tgtttgagct ggcttggatg ctgtccaagg 700
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 gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
 cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgcctg 900
 gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
 taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000
 aggagtccct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
 ttccaggcca tggacatctc cttgaaggag aatttgcgga aaatgattga 1100
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 gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200
 gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300
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 accattgcca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41

Met	Phe	Val	Ser	Asp	Phe	Arg	Lys	Glu	Phe	Tyr	Glu	Val	Val	Gln	1	5	10	15
Ser	Gln	Arg	Val	Leu	Leu	Phe	Val	Ala	Ser	Asp	Val	Asp	Ala	Leu	20	25	30	
Cys	Ala	Cys	Lys	Ile	Leu	Gln	Ala	Leu	Phe	Gln	Cys	Asp	His	Val	35	40	45	
Gln	Tyr	Thr	Leu	Val	Pro	Val	Ser	Gly	Trp	Gln	Glu	Leu	Glu	Thr	50	55	60	
Ala	Phe	Leu	Glu	His	Lys	Glu	Gln	Phe	His	Tyr	Phe	Ile	Leu	Ile	65	70	75	
Asn	Cys	Gly	Ala	Asn	Val	Asp	Leu	Leu	Asp	Ile	Leu	Gln	Pro	Asp	80	85	90	
Glu	Asp	Thr	Ile	Phe	Phe	Val	Cys	Asp	Ser	His	Arg	Pro	Val	Asn	95	100	105	
Val	Val	Asn	Val	Tyr	Asn	Asp	Thr	Gln	Ile	Lys	Leu	Leu	Ile	Lys	110	115	120	
Gln	Asp	Asp	Asp	Leu	Glu	Val	Pro	Ala	Tyr	Glu	Asp	Ile	Phe	Arg	125	130	135	
Asp	Glu	Glu	Glu	Asp	Glu	Glu	His	Ser	Gly	Asn	Asp	Ser	Asp	Gly	140	145	150	
Ser	Glu	Pro	Ser	Glu	Lys	Arg	Thr	Arg	Leu	Glu	Glu	Glu	Ile	Val	155	160	165	
Glu	Gln	Thr	Met	Arg	Arg	Arg	Gln	Arg	Arg	Glu	Trp	Glu	Ala	Arg	170	175	180	
Arg	Arg	Asp	Ile	Leu	Phe	Asp	Tyr	Glu	Gln	Tyr	Glu	Tyr	His	Gly	185	190	195	
Thr	Ser	Ser	Ala	Met	Val	Met	Phe	Glu	Leu	Ala	Trp	Met	Leu	Ser	200	205	210	
Lys	Asp	Leu	Asn	Asp	Met	Leu	Trp	Trp	Ala	Ile	Val	Gly	Leu	Thr	215	220	225	
Asp	Gln	Trp	Val	Gln	Asp	Lys	Ile	Thr	Gln	Met	Lys	Tyr	Val	Thr	230	235	240	
Asp	Val	Gly	Val	Leu	Gln	Arg	His	Val	Ser	Arg	His	Asn	His	Arg	245	250	255	
Asn	Glu	Asp	Glu	Glu	Asn	Thr	Leu	Ser	Val	Asp	Cys	Thr	Arg	Ile	260	265	270	
Ser	Phe	Glu	Tyr	Asp	Leu	Arg	Leu	Val	Leu	Tyr	Gln	His	Trp	Ser	275	280	285	
Leu	His	Asp	Ser	Leu	Cys	Asn	Thr	Ser	Tyr	Thr	Ala	Ala	Arg	Phe				

	290		295		300
Lys Leu Trp Ser	Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu			
	305	310			315
Ala Asp Met Gly	Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln			
	320	325			330
Ala Met Asp Ile	Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu			
	335	340			345
Glu Ser Ala Asn	Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr			
	350	355			360
Phe Ser Ile His	Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp			
	365	370			375
Val Val Phe Ala	Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp			
	380	385			390
Gly Ser Gly Thr	Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser			
	395	400			405
Arg Ser Asn Leu	Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys			
	410	415			420
Lys Gln Leu Arg	Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys			
	425	430			435
Thr Asn Leu Val	Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu			
	440	445			450
Met Glu Gly Thr	Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser			
	455	460			465
Leu Ser Leu Leu	Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser			
	470	475			480
Thr Lys Asn Arg	Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala			
	485	490			495
Pro Leu Ser Met	Glu His Gly Thr Val	Thr Val Val Gly Ile Pro			
	500	505			510
Pro Glu Thr Asp	Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala			
	515	520			525
Phe Glu Lys Ala	Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn			
	530	535			540
His Phe Asp Leu	Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser			
	545	550			555
Lys Phe Leu Asp	Ala Leu Ile Ser Leu	Leu Ser			
	560	565			

<210> 42
<211> 380

<212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

 <400> 42
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 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaata gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

 <210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 43
 ttccgcaaag agttctacga ggtgg 25

 <210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 44
 attgacaaca ttgactggcc tatggg 26

 <210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46
 <211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
 caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
 tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
 ggaaatagac tacagcccca attggctgac tttggctata gaaaaaagaa 150
 aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200
 gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250
 gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgtctg 300
 ggcagcgctc ctgctctttc tctgatgtg tgagatccgt atggtggagc 350
 tcacctttga cagagctgtg gccagcggct gccaacggtg ctgtgactct 400
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
 cccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
 agggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
 agggaggggc cccaagggga gcctggccct cagggcagca agggtgacaa 600
 gggggagatg ggcagccccg gcgccccgtg ccagaagcgc ttcttcgcct 650
 tctcagtggg ccgcaagacg gcctgcaca gcggcgagga cttccagacg 700
 ctgctcttcg aaaggggtctt tgtgaacctt gatgggtgct ttgacatggc 750
 gaccggccag tttgctgctc ccctgcgtgg catctacttc ttcagcctca 800
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 cagaaagagg ctgtcatcct gtacgcgcag cccagcgagc gcagcatcat 900
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 taaagaatgc tgtctcctct tggaaaaaaaa aaaaaaaaaa 3089

<210> 47
 <211> 259
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal Peptide
 <222> 1-20
 <223> Signal Peptide

<220>
 <221> N-glycosylation Site
 <222> 72-75
 <223> N-glycosylation Site

<220>
 <221> Clq Domain Proteins
 <222> 144-178, 78-111, 84-117
 <223> Clq Domain Proteins

<400> 47
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 20 25 30
 Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp
 35 40 45
 Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
 50 55 60
 Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
 65 70 75
 Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly
 80 85 90
 Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
 95 100 105
 Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
 110 115 120

Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu	
				125					130					135	
His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe	
				140					145					150	
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala	
				155					160					165	
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser	
				170					175					180	
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys	
				185					190					195	
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met	
				200					205					210	
Gln	Ser	Gln	Ser	Val	Met	Leu	Asp	Leu	Ala	Tyr	Gly	Asp	Arg	Val	
				215					220					225	
Trp	Val	Arg	Leu	Phe	Lys	Arg	Gln	Arg	Glu	Asn	Ala	Ile	Tyr	Ser	
				230					235					240	
Asn	Asp	Phe	Asp	Thr	Tyr	Ile	Thr	Phe	Ser	Gly	His	Leu	Ile	Lys	
				245					250					255	

Ala Glu Asp Asp

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccagggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 50
ctactttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
<211> 2768
<212> DNA
<213> Homo sapiens

<400> 51
actegaacgc agttgcttcg ggacccagga cccctctggg cccgacccgc 50
caggaaagac tgaggccgcg gcctgccccg cccggctccc tgcgcgcgcg 100
ccgcctcccc ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150
tgctcctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200
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 aaaagatgaa gtgtgaaa 2768

<210> 52
 <211> 673
 <212> PRT
 <213> Homo sapiens

<400> 52
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 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu
 95 100 105
 Asp Leu Thr Ala Asn Arg Leu His Glu Ile Thr Asn Glu Thr Phe
 110 115 120
 Arg Gly Leu Arg Arg Leu Glu Arg Leu Tyr Leu Gly Lys Asn Arg
 125 130 135
 Ile Arg His Ile Gln Pro Gly Ala Phe Asp Thr Leu Asp Arg Leu
 140 145 150
 Leu Glu Leu Lys Leu Gln Asp Asn Glu Leu Arg Ala Leu Pro Pro
 155 160 165
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser
 170 175 180
 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu
 185 190 195
 Ala Leu Arg Leu Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly
 200 205 210
 Leu Phe Ser Arg Leu Arg Asn Leu His Asp Leu Asp Val Ser Asp
 215 220 225
 Asn Gln Leu Glu Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly

				230						235					240
Leu	Thr	Arg	Leu	Arg	Leu	Ala	Gly	Asn	Thr	Arg	Ile	Ala	Gln	Leu	
				245					250					255	
Arg	Pro	Glu	Asp	Leu	Ala	Gly	Leu	Ala	Ala	Leu	Gln	Glu	Leu	Asp	
				260					265					270	
Val	Ser	Asn	Leu	Ser	Leu	Gln	Ala	Leu	Pro	Gly	Asp	Leu	Ser	Gly	
				275					280					285	
Leu	Phe	Pro	Arg	Leu	Arg	Leu	Leu	Ala	Ala	Ala	Arg	Asn	Pro	Phe	
				290					295					300	
Asn	Cys	Val	Cys	Pro	Leu	Ser	Trp	Phe	Gly	Pro	Trp	Val	Arg	Glu	
				305					310					315	
Ser	His	Val	Thr	Leu	Ala	Ser	Pro	Glu	Glu	Thr	Arg	Cys	His	Phe	
				320					325					330	
Pro	Pro	Lys	Asn	Ala	Gly	Arg	Leu	Leu	Leu	Glu	Leu	Asp	Tyr	Ala	
				335					340					345	
Asp	Phe	Gly	Cys	Pro	Ala	Thr	Thr	Thr	Thr	Ala	Thr	Val	Pro	Thr	
				350					355					360	
Thr	Arg	Pro	Val	Val	Arg	Glu	Pro	Thr	Ala	Leu	Ser	Ser	Ser	Leu	
				365					370					375	
Ala	Pro	Thr	Trp	Leu	Ser	Pro	Thr	Ala	Pro	Ala	Thr	Glu	Ala	Pro	
				380					385					390	
Ser	Pro	Pro	Ser	Thr	Ala	Pro	Pro	Thr	Val	Gly	Pro	Val	Pro	Gln	
				395					400					405	
Pro	Gln	Asp	Cys	Pro	Pro	Ser	Thr	Cys	Leu	Asn	Gly	Gly	Thr	Cys	
				410					415					420	
His	Leu	Gly	Thr	Arg	His	His	Leu	Ala	Cys	Leu	Cys	Pro	Glu	Gly	
				425					430					435	
Phe	Thr	Gly	Leu	Tyr	Cys	Glu	Ser	Gln	Met	Gly	Gln	Gly	Thr	Arg	
				440					445					450	
Pro	Ser	Pro	Thr	Pro	Val	Thr	Pro	Arg	Pro	Pro	Arg	Ser	Leu	Thr	
				455					460					465	
Leu	Gly	Ile	Glu	Pro	Val	Ser	Pro	Thr	Ser	Leu	Arg	Val	Gly	Leu	
				470					475					480	
Gln	Arg	Tyr	Leu	Gln	Gly	Ser	Ser	Val	Gln	Leu	Arg	Ser	Leu	Arg	
				485					490					495	
Leu	Thr	Tyr	Arg	Asn	Leu	Ser	Gly	Pro	Asp	Lys	Arg	Leu	Val	Thr	
				500					505					510	
Leu	Arg	Leu	Pro	Ala	Ser	Leu	Ala	Glu	Tyr	Thr	Val	Thr	Gln	Leu	
				515					520					525	

Arg	Pro	Asn	Ala	Thr	Tyr	Ser	Val	Cys	Val	Met	Pro	Leu	Gly	Pro
				530					535					540
Gly	Arg	Val	Pro	Glu	Gly	Glu	Glu	Ala	Cys	Gly	Glu	Ala	His	Thr
				545					550					555
Pro	Pro	Ala	Val	His	Ser	Asn	His	Ala	Pro	Val	Thr	Gln	Ala	Arg
				560					565					570
Glu	Gly	Asn	Leu	Pro	Leu	Leu	Ile	Ala	Pro	Ala	Leu	Ala	Ala	Val
				575					580					585
Leu	Leu	Ala	Ala	Leu	Ala	Ala	Val	Gly	Ala	Ala	Tyr	Cys	Val	Arg
				590					595					600
Arg	Gly	Arg	Ala	Met	Ala	Ala	Ala	Ala	Gln	Asp	Lys	Gly	Gln	Val
				605					610					615
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				620					625					630
Leu	Glu	Pro	Gly	Pro	Lys	Ala	Thr	Glu	Gly	Gly	Gly	Glu	Ala	Leu
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Pro	Ser	Gly	Ser	Glu	Cys	Glu	Val	Pro	Leu	Met	Gly	Phe	Pro	Gly
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<400> 54
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<212> DNA

<213> Homo sapiens

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 <211> 811
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
 50 55 60
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
 65 70 75
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
 80 85 90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	
				95					100					105	
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
				140					145					150	
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	

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Ser Cys Phe Ala	Asn Asn Thr Pro Leu	Glu His Leu Asp Leu	Ser
	395	400	405
Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp	Pro
	410	415	420
Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser	Asp
	425	430	435
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp	Leu
	440	445	450
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His	Leu
	455	460	465
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr	Asp
	470	475	480
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn	Ile
	485	490	495
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln	Ser
	500	505	510
Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe	Arg
	515	520	525
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr	Ser
	530	535	540
Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu	Tyr
	545	550	555
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu	His
	560	565	570
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val	Val
	575	580	585
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu	His
	590	595	600
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr	Gln
	605	610	615
Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys	Arg
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Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp	Ser
	635	640	645
Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu	Asp
	650	655	660
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro	Gly
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Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	
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Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	
				695					700					705	
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	
				710					715					720	
Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe	
				725					730					735	
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu	
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Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly	
				755					760					765	
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu	
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Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn	
				785					790					795	
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Leu

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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<210> 59
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<400> 59
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 <212> DNA
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<223> Synthetic oligonucleotide probe

<400> 60

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<210> 61

<211> 3772

<212> DNA

<213> Homo sapiens

<400> 61

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 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
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 Leu Ala Val Thr Leu Ala Gly Val Gly Ala Gln Gly Ala Ala Leu
 20 25 30

Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro	35	40	45
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro	50	55	60
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu	65	70	75
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys	80	85	90
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Pro	Gly	Lys	His	Ser	95	100	105
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn	110	115	120
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser	125	130	135
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln	140	145	150
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg	155	160	165
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr	170	175	180
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile	185	190	195
Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr	200	205	210
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr	215	220	225
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys	230	235	240
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu	245	250	255
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr	260	265	270
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys	275	280	285
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn	290	295	300
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp	305	310	315
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val			

	320		325		330
Val Asn Glu Met	Cys Pro Asn Ile Thr	Arg Ile Tyr Asn Ile Gly			
	335	340			345
Lys Ser His Gln	Gly Leu Lys Leu Tyr	Ala Val Glu Ile Ser Asp			
	350	355			360
His Pro Gly Glu	His Glu Val Gly Glu	Pro Glu Phe His Tyr Ile			
	365	370			375
Ala Gly Ala His	Gly Asn Glu Val Leu	Gly Arg Glu Leu Leu Leu			
	380	385			390
Leu Leu Val Gln	Phe Val Cys Gln Glu	Tyr Leu Ala Arg Asn Ala			
	395	400			405
Arg Ile Val His	Leu Val Glu Glu Thr	Arg Ile His Val Leu Pro			
	410	415			420
Ser Leu Asn Pro	Asp Gly Tyr Glu Lys	Ala Tyr Glu Gly Gly Ser			
	425	430			435
Glu Leu Gly Gly	Trp Ser Leu Gly Arg	Trp Thr His Asp Gly Ile			
	440	445			450
Asp Ile Asn Asn	Asn Phe Pro Asp Leu	Asn Thr Leu Leu Trp Glu			
	455	460			465
Ala Glu Asp Arg	Gln Asn Val Pro Arg	Lys Val Pro Asn His Tyr			
	470	475			480
Ile Ala Ile Pro	Glu Trp Phe Leu Ser	Glu Asn Ala Thr Val Ala			
	485	490			495
Ala Glu Thr Arg	Ala Val Ile Ala Trp	Met Glu Lys Ile Pro Phe			
	500	505			510
Val Leu Gly Gly	Asn Leu Gln Gly Gly	Glu Leu Val Val Ala Tyr			
	515	520			525
Pro Tyr Asp Leu	Val Arg Ser Pro Trp	Lys Thr Gln Glu His Thr			
	530	535			540
Pro Thr Pro Asp	Asp His Val Phe Arg	Trp Leu Ala Tyr Ser Tyr			
	545	550			555
Ala Ser Thr His	Arg Leu Met Thr Asp	Ala Arg Arg Arg Val Cys			
	560	565			570
His Thr Glu Asp	Phe Gln Lys Glu Glu	Gly Thr Val Asn Gly Ala			
	575	580			585
Ser Trp His Thr	Val Ala Gly Ser Leu	Asn Asp Phe Ser Tyr Leu			
	590	595			600
His Thr Asn Cys	Phe Glu Leu Ser Ile	Tyr Val Gly Cys Asp Lys			
	605	610			615

Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg	
				620					625					630	
Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys	
				635					640					645	
Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile	
				650					655					660	
Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp	
				665					670					675	
Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr	
				680					685					690	
Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val	
				695					700					705	
Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys	
				710					715					720	
Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys	
				725					730					735	
Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg	
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Lys	Arg	Arg	Gln	Arg	Gly										
				755											

<210> 63
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 63
 gttctcaatg agctaccctg cccc 24

<210> 64
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 64
 cgcgatgtag tggaactcgg gctc 24

<210> 65
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 65

atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66

<211> 2854

<212> DNA

<213> Homo sapiens

<400> 66

ctaagaggac aagatgaggc cggcctctc atttctccta gcccttctgt 50

tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100

cccagccccg gcttcagctc tttcccaggt gttgactcca gctccagctt 150

cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200

gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250

cgtgggacct gccagtgtc tgtttccctg ccagacacca cttttcccg 300

ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350

ttgagaaaaga actttctaaa gtgagggaa atgtccaatt aattagtgtg 400

tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450

ggataccatt tcttacctg aactggactt cgagctgac aaggtagaag 500

tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550

agctcagaaa ttgttgacca gctggaggtg gagataagaa atatgactct 600

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gccgagaaat cgtggctctg aagaccaagc tgaaagagtg tgaggcctct 700

aaagatcaaa acaccctgt cgtccacct cctcccactc cagggagctg 750

tggtcatggg ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800

actggagagg gttttcttat ctatatggtg cttggggtag ggattactct 850

ccccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950

tattgtatat aaatgctcga gagttgcgga tcacctatgg ccaaggtagt 1000

ggtacagcag tttacaacaa caacatgtac gtcaacatgt acaacaccgg 1050

gaatattgcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100

ctctccctaa tgetgcctat aataaccgct tttcatatgc taatgttgct 1150

tggcaagata ttgactttgc tgtggatgag aatggattgt gggttattta 1200

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 cttctacctc ataacttcct tccaaaggca gctcagaaga ttagaaccag 2300
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 aaaaaaatta atagttttct atggaactga tctaagatta gaaaaattaa 2400
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 aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
 aaaa 2854

<210> 67
 <211> 510
 <212> PRT
 <213> Homo sapiens

<400> 67
 Met Arg Pro Gly Leu Ser Phe Leu Leu Ala Leu Leu Phe Phe Leu
 1 5 10 15
 Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro
 20 25 30
 Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
 35 40 45
 Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
 50 55 60
 Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
 65 70 75
 Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
 80 85 90
 Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
 95 100 105
 Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
 110 115 120
 Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
 125 130 135
 Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
 140 145 150
 Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
 155 160 165
 Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
 170 175 180
 Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
 185 190 195
 Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
 200 205 210

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu	215	220	225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	230	235	240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	245	250	255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	260	265	270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	275	280	285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	290	295	300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	305	310	315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	320	325	330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	335	340	345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	350	355	360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	365	370	375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	380	385	390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	395	400	405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	410	415	420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	425	430	435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	440	445	450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	455	460	465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	470	475	480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	485	490	495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln			

500

505

510

<210> 68
 <211> 410
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 206, 217, 387
 <223> unknown base

<400> 68
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 cctgtcgtcc accctcctcc cactccaggg agctgtgggc atgggtgggtgt 100
 ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggtttt 150
 cttatctata tgggtgcttg ggtagggatt actctcccca gcatccaaac 200
 aaaggngatgt attggngggc gccattgaat acagatggga gactgttgga 250
 gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300
 ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350
 aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400
 taacctgacc 410

<210> 69
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 69
 agctgtgggc atgggtgggtgt ggtg 24

<210> 70
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 70
 ctaccttggc cataggtgat ccgc 24

<210> 71
 <211> 42
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 71
 catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72
 <211> 3127
 <212> DNA
 <213> Homo sapiens

<400> 72
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 tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150
 ccgtgtttgc tatgccgatg ctgtcctagt ggaaacaact ccactgtaac 200
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 taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300
 tgtgagaatg agaaagggtg tgtcccttgt aacatthttgg ttggctataa 350
 agctgtatat cgtttgtgct ttggthttggc tatgttctat cttcttctct 400
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 cacaatggat tttggthctt taaatthtgc gcagcaattg caattattat 500
 tggggcattc ttcattccag aaggaaacttt tacaactgtg tggthttatg 550
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 attgatttht cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
 agggaaactcg agatgttggc atgcagcctt gttatcagct acagctctga 700
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 cctctgcgtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
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ttacacctca tactgtgata attaatgtga tgtggattgc tgggtgccag 2750
catgacccat aaacagggtca gaagaatgat ggaatgtttt agaataaact 2800
cctgcttata gtatactaca cagttcaaaa gatgttttaa atgcttttgt 2850
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gtgaatggaa tataacaatt cagcttaatt ccccaacctt attctgtgtg 3050
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<210> 73

<211> 453

<212> PRT

<213> Homo sapiens

<400> 73

Met	Gly	Ser	Val	Leu	Gly	Leu	Cys	Ser	Met	Ala	Ser	Trp	Ile	Pro
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				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150

Val Trp Phe Tyr	Val Gly Met Ala Gly	Ala Phe Cys Phe Ile Leu
155	160	165
Ile Gln Leu Val	Leu Leu Ile Asp Phe	Ala His Ser Trp Asn Glu
170	175	180
Ser Trp Val Glu	Lys Met Glu Glu Gly	Asn Ser Arg Cys Trp Tyr
185	190	195
Ala Ala Leu Leu	Ser Ala Thr Ala Leu	Asn Tyr Leu Leu Ser Leu
200	205	210
Val Ala Ile Val	Leu Phe Phe Val Tyr	Tyr Thr His Pro Ala Ser
215	220	225
Cys Ser Glu Asn	Lys Ala Phe Ile Ser	Val Asn Met Leu Leu Cys
230	235	240
Val Gly Ala Ser	Val Met Ser Ile Leu	Pro Lys Ile Gln Glu Ser
245	250	255
Gln Pro Arg Ser	Gly Leu Leu Gln Ser	Ser Val Ile Thr Val Tyr
260	265	270
Thr Met Tyr Leu	Thr Trp Ser Ala Met	Thr Asn Glu Pro Glu Thr
275	280	285
Asn Cys Asn Pro	Ser Leu Leu Ser Ile	Ile Gly Tyr Asn Thr Thr
290	295	300
Ser Thr Val Pro	Lys Glu Gly Gln Ser	Val Gln Trp Trp His Ala
305	310	315
Gln Gly Ile Ile	Gly Leu Ile Leu Phe	Leu Leu Cys Val Phe Tyr
320	325	330
Ser Ser Ile Arg	Thr Ser Asn Asn Ser	Gln Val Asn Lys Leu Thr
335	340	345
Leu Thr Ser Asp	Glu Ser Thr Leu Ile	Glu Asp Gly Gly Ala Arg
350	355	360
Ser Asp Gly Ser	Leu Glu Asp Gly Asp	Asp Val His Arg Ala Val
365	370	375
Asp Asn Glu Arg	Asp Gly Val Thr Tyr	Ser Tyr Ser Phe Phe His
380	385	390
Phe Met Leu Phe	Leu Ala Ser Leu Tyr	Ile Met Met Thr Leu Thr
395	400	405
Asn Trp Ser Arg	Tyr Glu Pro Ser Arg	Glu Met Lys Ser Gln Trp
410	415	420
Thr Ala Val Trp	Val Lys Ile Ser Ser	Ser Trp Ile Gly Ile Val
425	430	435
Leu Tyr Val Trp	Thr Leu Val Ala Pro	Leu Val Leu Thr Asn Arg

440

445

450

Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
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 cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100
 ataccatggt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150
 tagtggaaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgtccc 300
 ttgtaacatt ttggttggt ataaagctgt atacgtttg tgctttggtt 350
 tggctatggt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400
 agcagtgatc ctagagctgc agtgcacaat ggattttggt tctttaaatt 450
 tgctgcagca attgcaatta ttattggggc 480

<210> 75
 <211> 438
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
 <223> unknown base

<400> 75
 gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50
 cgagctggat accangtttg tgtggaagtg ccccggtttt gntatgccga 100
 tgctgtccta gtggaaacaa ntccactgta attagattga tntatgcact 150
 tttnttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
 tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
 gttgtccctt gtaacatctt gggtggctat aaagctgtat atngtttgtg 300

ctttggtttg gctangttct atntttctct ctctttacta atgatcaaag 350
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50
gagatgggga gcgtccttgg ggttggtgctc catggcgagc tggataccat 100
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgctg tcttagtgga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttggttg 200
agtatgtgta gcttggtgta tggtgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aagggtgttg cocttgtaac 300
atthtggttg gctataaagc tgtatatcgt ttgtgcttg gtttggtat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400
atcctagagc tgcagtgcac aatggatttt gggtctttta atttgctgca 450
gcaattgcaa ttattatttg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaagggtgt gtcccttctg aacatttttg gttggctata aagctgtata 200
tcgtttgtgc tttgggttgg ctatgttcta tcttcttctc tctttactaa 250

tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
 ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
 cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcattg 400
 caggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
 gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaaactc 500
 gagatggttg tatgcagcct tggtatcagc tacagctctg aattatctgc 550
 tgtcttttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600
 agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
 tgggtgcttct gtaatg 666

<210> 78
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 78
 atgtttgtgt ggaagtgcc cg 22

<210> 79
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 79
 gtcaacatgc tcctctgc 18

<210> 80
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 80
 aatccattgt gcaactgcagc tctagg 26

<210> 81
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 81
 gagcatgccca ccactggact gac 23

<210> 82
 <211> 54
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 82
 gccgatgctg tcctagtggg aacaactcca ctgtaactag attgatctat 50
 gcac 54

<210> 83
 <211> 3906
 <212> DNA
 <213> Homo sapiens

<400> 83
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 cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggagagtc 150
 ctgtgaaagc agataaaaaga aaacatttat taacgtgtca ttacgagggg 200
 agcgcccggc cggggctgtc gcaactccccg cggaacattt ggctccctcc 250
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 aatcccacat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500
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 gaaaaa 3906

<210> 84

<211> 867

<212> PRT

<213> Homo sapiens

<400> 84

Met	Gly	Pro	Pro	Ser	Leu	Val	Leu	Cys	Leu	Leu	Ser	Ala	Thr	Val	1	5	10	15
Phe	Ser	Leu	Leu	Gly	Gly	Ser	Ser	Ala	Phe	Leu	Ser	His	His	Arg	20	25	30	
Leu	Lys	Gly	Arg	Phe	Gln	Arg	Asp	Arg	Arg	Asn	Ile	Arg	Pro	Asn	35	40	45	
Ile	Ile	Leu	Val	Leu	Thr	Asp	Asp	Gln	Asp	Val	Glu	Leu	Gly	Ser	50	55	60	
Met	Gln	Val	Met	Asn	Lys	Thr	Arg	Arg	Ile	Met	Glu	Gln	Gly	Gly	65	70	75	
Ala	His	Phe	Ile	Asn	Ala	Phe	Val	Thr	Thr	Pro	Met	Cys	Cys	Pro	80	85	90	
Ser	Arg	Ser	Ser	Ile	Leu	Thr	Gly	Lys	Tyr	Val	His	Asn	His	Asn	95	100	105	
Thr	Tyr	Thr	Asn	Asn	Glu	Asn	Cys	Ser	Ser	Pro	Ser	Trp	Gln	Ala	110	115	120	
Gln	His	Glu	Ser	Arg	Thr	Phe	Ala	Val	Tyr	Leu	Asn	Ser	Thr	Gly	125	130	135	
Tyr	Arg	Thr	Ala	Phe	Phe	Gly	Lys	Tyr	Leu	Asn	Glu	Tyr	Asn	Gly	140	145	150	
Ser	Tyr	Val	Pro	Pro	Gly	Trp	Lys	Glu	Trp	Val	Gly	Leu	Leu	Lys	155	160	165	
Asn	Ser	Arg	Phe	Tyr	Asn	Tyr	Thr	Leu	Cys	Arg	Asn	Gly	Val	Lys	170	175	180	
Glu	Lys	His	Gly	Ser	Asp	Tyr	Ser	Lys	Asp	Tyr	Leu	Thr	Asp	Leu	185	190	195	
Ile	Thr	Asn	Asp	Ser	Val	Ser	Phe	Phe	Arg	Thr	Ser	Lys	Lys	Met	200	205	210	
Tyr	Pro	His	Arg	Pro	Val	Leu	Met	Val	Ile	Ser	His	Ala	Ala	Pro	215	220	225	
His	Gly	Pro	Glu	Asp	Ser	Ala	Pro	Gln	Tyr	Ser	Arg	Leu	Phe	Pro				

				230					235					240
Asn	Ala	Ser	Gln	His	Ile	Thr	Pro	Ser	Tyr	Asn	Tyr	Ala	Pro	Asn
				245					250					255
Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro
				260					265					270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln
				275					280					285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met
				290					295					300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr
				305					310					315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly
				320					325					330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val
				335					340					345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val
				350					355					360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu
				365					370					375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu
				380					385					390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met
				395					400					405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu
				410					415					420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe
				425					430					435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu
				440					445					450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val
				455					460					465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro
				470					475					480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys
				485					490					495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp
				500					505					510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys
				515					520					525

Lys Tyr Lys Ala	Ser Tyr Val Arg Ser	Arg Ser Ile Arg Ser Val	530	535	540
Ala Ile Glu Val	Asp Gly Arg Val Tyr	His Val Gly Leu Gly Asp	545	550	555
Ala Ala Gln Pro	Arg Asn Leu Thr Lys	Arg His Trp Pro Gly Ala	560	565	570
Pro Glu Asp Gln	Asp Asp Lys Asp Gly	Gly Asp Phe Ser Gly Thr	575	580	585
Gly Gly Leu Pro	Asp Tyr Ser Ala Ala	Asn Pro Ile Lys Val Thr	590	595	600
His Arg Cys Tyr	Ile Leu Glu Asn Asp	Thr Val Gln Cys Asp Leu	605	610	615
Asp Leu Tyr Lys	Ser Leu Gln Ala Trp	Lys Asp His Lys Leu His	620	625	630
Ile Asp His Glu	Ile Glu Thr Leu Gln	Asn Lys Ile Lys Asn Leu	635	640	645
Arg Glu Val Arg	Gly His Leu Lys Lys	Lys Arg Pro Glu Glu Cys	650	655	660
Asp Cys His Lys	Ile Ser Tyr His Thr	Gln His Lys Gly Arg Leu	665	670	675
Lys His Arg Gly	Ser Ser Leu His Pro	Phe Arg Lys Gly Leu Gln	680	685	690
Glu Lys Asp Lys	Val Trp Leu Leu Arg	Glu Gln Lys Arg Lys Lys	695	700	705
Lys Leu Arg Lys	Leu Leu Lys Arg Leu	Gln Asn Asn Asp Thr Cys	710	715	720
Ser Met Pro Gly	Leu Thr Cys Phe Thr	His Asp Asn Gln His Trp	725	730	735
Gln Thr Ala Pro	Phe Trp Thr Leu Gly	Pro Phe Cys Ala Cys Thr	740	745	750
Ser Ala Asn Asn	Asn Thr Tyr Trp Cys	Met Arg Thr Ile Asn Glu	755	760	765
Thr His Asn Phe	Leu Phe Cys Glu Phe	Ala Thr Gly Phe Leu Glu	770	775	780
Tyr Phe Asp Leu	Asn Thr Asp Pro Tyr	Gln Leu Met Asn Ala Val	785	790	795
Asn Thr Leu Asp	Arg Asp Val Leu Asn	Gln Leu His Val Gln Leu	800	805	810
Met Glu Leu Arg	Ser Cys Lys Gly Tyr	Lys Gln Cys Asn Pro Arg			

815	820	825
Thr Arg Asn Met Asp Leu Asp Gly Gly Ser Tyr Glu Gln Tyr Arg		
830	835	840
Gln Phe Gln Arg Arg Lys Trp Pro Glu Met Lys Arg Pro Ser Ser		
845	850	855
Lys Ser Leu Gly Gln Leu Trp Glu Gly Trp Glu Gly		
860	865	

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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 85
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<210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 86
 ggccagctat ctccgcag 18

<210> 87
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 87
 aagggcctgc aagagaag 18

<210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 88
 cactgggaca actgtggg 18

<210> 89
 <211> 18
 <212> DNA

<213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 89
 cagaggcaac gtggagag 18
 <210> 90
 <211> 21
 <212> DNA
 <213> Artificial Sequence
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 aagtattgtc atacagtgtt c 21
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 <212> DNA
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 tagtacttgg gcacgaggtt ggag 24
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 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 92
 tcataccaac tgctggtcat tggc 24
 <210> 93
 <211> 45
 <212> DNA
 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 93
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 <210> 94
 <211> 971
 <212> DNA
 <213> Homo sapiens
 <400> 94

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<211> 115
<212> PRT
<213> Homo sapiens

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20 25 30
Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
35 40 45
Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
50 55 60

Phe	Arg	Arg	Arg	Gly	His	Leu	Gly	Ile	Phe	His	His	His	Arg	His
				65					70					75
Pro	Gly	His	Val	Ser	His	Val	Pro	Asn	Val	Gly	Leu	His	His	His
				80					85					90
His	His	Pro	Arg	His	Thr	Pro	His	His	Leu	His	His	His	His	His
				95					100					105
Pro	His	Arg	His	His	Pro	Arg	His	Ala	Arg					
				110					115					

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 <212> DNA
 <213> Homo sapiens

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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcaccc cccatccgca acgtcactgt ggcctacaag 200
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 cagcatctct cccaagctcc gctccatgc tgtctactat gacaaccccc 300
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<210> 97

<211> 313

<212> PRT

<213> Homo sapiens

<400> 97

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Leu	Ala	Gly	Val	Glu	Val	Ser	Ala	Gly	Ser	Pro	Pro	Ile	Arg	Asn	35	40	45	
Val	Thr	Val	Ala	Tyr	Lys	Phe	His	Met	Gly	Leu	Tyr	Gly	Glu	Thr	50	55	60	
Gly	Arg	Leu	Phe	Thr	Glu	Ser	Cys	Ser	Ile	Ser	Pro	Lys	Leu	Arg	65	70	75	
Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	80	85	90	
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	95	100	105	
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	110	115	120	
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	125	130	135	
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	140	145	150	
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	155	160	165	
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	170	175	180	
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	185	190	195	

Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	
				200					205					210	
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	
				215					220					225	
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	
				230					235					240	
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	
				245					250					255	
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	
				260					265					270	
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	
				275					280					285	
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	
				290					295					300	
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			
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<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
<211> 201
<212> PRT
<213> Homo sapiens

<400> 99
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20 25 30
Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
35 40 45
Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
50 55 60
His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
65 70 75
Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
80 85 90
Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
95 100 105
Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
110 115 120
Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
125 130 135
Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
140 145 150
Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
155 160 165
Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
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Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg
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<211> 705
<212> DNA
<213> Homo sapiens

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<210> 101
 <211> 543
 <212> DNA
 <213> Homo sapiens

<400> 101
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 accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
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<210> 102
 <211> 1316

<212> DNA
<213> Homo sapiens

<400> 102

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<210> 103
 <211> 157
 <212> PRT
 <213> Homo sapiens

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 Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
 35 40 45
 Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
 50 55 60
 Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
 65 70 75
 Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
 80 85 90
 Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
 95 100 105
 Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
 110 115 120
 Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
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 Arg Thr Glu Asp Leu Trp Gln
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<210> 104
 <211> 545
 <212> DNA
 <213> Homo sapiens

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<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

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 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
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 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
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<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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<210> 109
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 109
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<210> 110
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 110
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<210> 111
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 111
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<210> 112
 <211> 3004
 <212> DNA
 <213> Homo sapiens

<400> 112
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<210> 113

<211> 610

<212> PRT

<213> Homo sapiens

<400> 113

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Val	Leu	Cys	Lys	Val	Tyr	Leu	Gly	Leu	Phe	Ser	Gly	Ser	Ser	Pro
				20					25					30

Asn	Pro	Phe	Ser	Glu	Asp	Val	Lys	Arg	Pro	Pro	Ala	Pro	Leu	Val
				35					40					45

Thr	Asp	Lys	Glu	Ala	Arg	Lys	Lys	Val	Leu	Lys	Gln	Ala	Phe	Ser
				50					55					60

Ala	Asn	Gln	Val	Pro	Glu	Lys	Leu	Asp	Val	Val	Val	Ile	Gly	Ser
				65					70					75

Gly	Phe	Gly	Gly	Leu	Ala	Ala	Ala	Ala	Ile	Leu	Ala	Lys	Ala	Gly
				80					85					90

Lys	Arg	Val	Leu	Val	Leu	Glu	Gln	His	Thr	Lys	Ala	Gly	Gly	Cys
				95					100					105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile
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His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile
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Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser
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Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys
				155					160					165

Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu
				170					175					180

Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile
				185					190					195

Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu
				200					205					210

Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys
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Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln
				230					235					240

Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu
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Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	
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Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	
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Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	
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Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	
				305					310					315	
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	
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Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	
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Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	
				350					355					360	
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	
				365					370					375	
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	
				380					385					390	
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	
				395					400					405	
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	
				410					415					420	
Glu	Arg	Tyr	Val	Ser	Met	Pro	Arg	Glu	Glu	Ala	Ala	Glu	His	Ile	
				425					430					435	
Pro	Leu	Leu	Phe	Phe	Ala	Phe	Pro	Ser	Ala	Lys	Asp	Pro	Thr	Trp	
				440					445					450	
Glu	Asp	Arg	Phe	Pro	Gly	Arg	Ser	Thr	Met	Ile	Met	Leu	Ile	Pro	
				455					460					465	
Thr	Ala	Tyr	Glu	Trp	Phe	Glu	Glu	Trp	Gln	Ala	Glu	Leu	Lys	Gly	
				470					475					480	
Lys	Arg	Gly	Ser	Asp	Tyr	Glu	Thr	Phe	Lys	Asn	Ser	Phe	Val	Glu	
				485					490					495	
Ala	Ser	Met	Ser	Val	Val	Leu	Lys	Leu	Phe	Pro	Gln	Leu	Glu	Gly	
				500					505					510	
Lys	Val	Glu	Ser	Val	Thr	Ala	Gly	Ser	Pro	Leu	Thr	Asn	Gln	Phe	
				515					520					525	
Tyr	Leu	Ala	Ala	Pro	Arg	Gly	Ala	Cys	Tyr	Gly	Ala	Asp	His	Asp	
				530					535					540	
Leu	Gly	Arg	Leu	His	Pro	Cys	Val	Met	Ala	Ser	Leu	Arg	Ala	Gln	

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Ser	Pro	Ile	Pro	Asn	Leu	Tyr	Leu	Thr	Gly	Gln	Asp	Ile	Phe	Thr
				560					565					570
Cys	Gly	Leu	Val	Gly	Ala	Leu	Gln	Gly	Ala	Leu	Leu	Cys	Ser	Ser
				575					580					585
Ala	Ile	Leu	Lys	Arg	Asn	Leu	Tyr	Ser	Asp	Leu	Lys	Asn	Leu	Asp
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Ser	Arg	Ile	Arg	Ala	Gln	Lys	Lys	Lys	Asn					
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 <211> 1701
 <212> DNA
 <213> Homo sapiens

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 aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
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a 1701

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<210> 115
<211> 301
<212> PRT
<213> Homo sapiens

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Glu Ser Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val
             35             40             45

Lys Asp His Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe
             50             55             60

Leu Asp Ser Glu Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu
             65             70             75

Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp
             80             85             90

Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu
             95             100            105

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Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly	110	115	120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp	125	130	135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg	140	145	150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp	155	160	165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met	170	175	180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn	185	190	195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu	200	205	210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val	215	220	225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln	230	235	240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro	245	250	255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly	260	265	270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly	275	280	285
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Leu

<210> 116

<211> 584

<212> DNA

<213> Homo sapiens

<400> 116

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<210> 117
<211> 123
<212> PRT
<213> Homo sapiens

<400> 117
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Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
35 40 45
His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
50 55 60
Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
65 70 75
Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
80 85 90
Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
95 100 105
Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
110 115 120
Phe Ser Pro

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<211> 3402
<212> DNA
<213> Homo sapiens

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Ala	Ala	Glu	Pro	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	200	205	210
Leu	Arg	Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	215	220	225
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Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro	410	415	420
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu	425	430	435
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His	440	445	450
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val	455	460	465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr			

	470	475	480
His Thr His Thr His Ser His Thr His Ser His Val Glu Gly Lys			
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Val His Gln His Ile His Tyr Gln Cys			
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<210> 121
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<220>
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<210> 122
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 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 122
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 <212> DNA
 <213> Homo sapiens

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<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

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Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys	35	40	45
Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe	50	55	60
Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp	65	70	75
Ala	Ile	Arg	Phe	Tyr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu	80	85	90
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr	95	100	105
Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu	110	115	120
Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val	125	130	135
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg	140	145	150
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys	155	160	165
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu	170	175	180
Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys	185	190	195
Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly	200	205	210
Gln	Val	Asn	Ala	Asp	Cys	Asp	Ala	Cys	Met	Cys	Gln	Asp	Phe	Met	215	220	225
Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly	230	235	240
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln	245	250	255
Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp	260	265	270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile	275	280	285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys	290	295	300
Ala	Glu	Phe	Val	Arg	Ala	Glu	Thr	Pro	Tyr	Met	Val	Met	Asn	Pro			

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Glu Thr Lys Ala	Arg Arg Ala Gly Gln	Ser Val Ser Leu Cys	Cys		
	320		325		330
Lys Ala Thr Gly	Lys Pro Arg Pro Asp	Lys Tyr Phe Trp Tyr	His		
	335		340		345
Asn Asp Thr Leu	Leu Asp Pro Ser Leu	Tyr Lys His Glu Ser	Lys		
	350		355		360
Leu Val Leu Arg	Lys Leu Gln Gln His	Gln Ala Gly Glu Tyr	Phe		
	365		370		375
Cys Lys Ala Gln	Ser Asp Ala Gly Ala	Val Lys Ser Lys Val	Ala		
	380		385		390
Gln Leu Ile Val	Thr Ala Ser Asp Glu	Thr Pro Cys Asn Pro	Val		
	395		400		405
Pro Glu Ser Tyr	Leu Ile Arg Leu Pro	His Asp Cys Phe Gln	Asn		
	410		415		420
Ala Thr Asn Ser	Phe Tyr Tyr Asp Val	Gly Arg Cys Pro Val	Lys		
	425		430		435
Thr Cys Ala Gly	Gln Gln Asp Asn Gly	Ile Arg Cys Arg Asp	Ala		
	440		445		450
Val Gln Asn Cys	Cys Gly Ile Ser Lys	Thr Glu Glu Arg Glu	Ile		
	455		460		465
Gln Cys Ser Gly	Tyr Thr Leu Pro Thr	Lys Val Ala Lys Glu	Cys		
	470		475		480
Ser Cys Gln Arg	Cys Thr Glu Thr Arg	Ser Ile Val Arg Gly	Arg		
	485		490		495
Val Ser Ala Ala	Asp Asn Gly Glu Pro	Met Arg Phe Gly His	Val		
	500		505		510
Tyr Met Gly Asn	Ser Arg Val Ser Met	Thr Gly Tyr Lys Gly	Thr		
	515		520		525
Phe Thr Leu His	Val Pro Gln Asp Thr	Glu Arg Leu Val Leu	Thr		
	530		535		540
Phe Val Asp Arg	Leu Gln Lys Phe Val	Asn Thr Thr Lys Val	Leu		
	545		550		555
Pro Phe Asn Lys	Lys Gly Ser Ala Val	Phe His Glu Ile Lys	Met		
	560		565		570
Leu Arg Arg Lys	Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr	Asn		
	575		580		585
Ile Ile Pro Leu	Gly Glu Val Val Gly	Glu Asp Pro Met Ala	Glu		
	590		595		600

Leu	Glu	Ile	Pro	Ser	Arg	Ser	Phe	Tyr	Arg	Gln	Asn	Gly	Glu	Pro	
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Tyr	Ile	Gly	Lys	Val	Lys	Ala	Ser	Val	Thr	Phe	Leu	Asp	Pro	Arg	
				620					625					630	
Asn	Ile	Ser	Thr	Ala	Thr	Ala	Ala	Gln	Thr	Asp	Leu	Asn	Phe	Ile	
				635					640					645	
Asn	Asp	Glu	Gly	Asp	Thr	Phe	Pro	Leu	Arg	Thr	Tyr	Gly	Met	Phe	
				650					655					660	
Ser	Val	Asp	Phe	Arg	Asp	Glu	Val	Thr	Ser	Glu	Pro	Leu	Asn	Ala	
				665					670					675	
Gly	Lys	Val	Lys	Val	His	Leu	Asp	Ser	Thr	Gln	Val	Lys	Met	Pro	
				680					685					690	
Glu	His	Ile	Ser	Thr	Val	Lys	Leu	Trp	Ser	Leu	Asn	Pro	Asp	Thr	
				695					700					705	
Gly	Leu	Trp	Glu	Glu	Glu	Gly	Asp	Phe	Lys	Phe	Glu	Asn	Gln	Arg	
				710					715					720	
Arg	Asn	Lys	Arg	Glu	Asp	Arg	Thr	Phe	Leu	Val	Gly	Asn	Leu	Glu	
				725					730					735	
Ile	Arg	Glu	Arg	Arg	Leu	Phe	Asn	Leu	Asp	Val	Pro	Glu	Ser	Arg	
				740					745					750	
Arg	Cys	Phe	Val	Lys	Val	Arg	Ala	Tyr	Arg	Ser	Glu	Arg	Phe	Leu	
				755					760					765	
Pro	Ser	Glu	Gln	Ile	Gln	Gly	Val	Val	Ile	Ser	Val	Ile	Asn	Leu	
				770					775					780	
Glu	Pro	Arg	Thr	Gly	Phe	Leu	Ser	Asn	Pro	Arg	Ala	Trp	Gly	Arg	
				785					790					795	
Phe	Asp	Ser	Val	Ile	Thr	Gly	Pro	Asn	Gly	Ala	Cys	Val	Pro	Ala	
				800					805					810	
Phe	Cys	Asp	Asp	Gln	Ser	Pro	Asp	Ala	Tyr	Ser	Ala	Tyr	Val	Leu	
				815					820					825	
Ala	Ser	Leu	Ala	Gly	Glu	Glu	Leu	Gln	Ala	Val	Glu	Ser	Ser	Pro	
				830					835					840	
Lys	Phe	Asn	Pro	Asn	Ala	Ile	Gly	Val	Pro	Gln	Pro	Tyr	Leu	Asn	
				845					850					855	
Lys	Leu	Asn	Tyr	Arg	Arg	Thr	Asp	His	Glu	Asp	Pro	Arg	Val	Lys	
				860					865					870	
Lys	Thr	Ala	Phe	Gln	Ile	Ser	Met	Ala	Lys	Pro	Arg	Pro	Asn	Ser	
				875					880					885	
Ala	Glu	Glu	Ser	Asn	Gly	Pro	Ile	Tyr	Ala	Phe	Glu	Asn	Leu	Arg	

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Ala Cys Glu Glu	Ala Pro Pro Ser	Ala Ala His Phe Arg Phe	Tyr		
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Gln Ile Glu Gly	Asp Arg Tyr Asp	Tyr Asn Thr Val Pro Phe	Asn		
	920		925		930
Glu Asp Asp Pro	Met Ser Trp Thr	Glu Asp Tyr Leu Ala Trp	Trp		
	935		940		945
Pro Lys Pro Met	Glu Phe Arg Ala	Cys Tyr Ile Lys Val Lys	Ile		
	950		955		960
Val Gly Pro Leu	Glu Val Asn Val	Arg Ser Arg Asn Met Gly	Gly		
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Thr His Arg Arg	Thr Val Gly Lys	Leu Tyr Gly Ile Arg Asp	Val		
	980		985		990
Arg Ser Thr Arg	Asp Arg Asp Gln	Pro Asn Val Ser Ala Ala	Cys		
	995		1000		1005
Leu Glu Phe Lys	Cys Ser Gly Met	Leu Tyr Asp Gln Asp Arg	Val		
	1010		1015		1020
Asp Arg Thr Leu	Val Lys Val Ile	Pro Gln Gly Ser Cys Arg	Arg		
	1025		1030		1035
Ala Ser Val Asn	Pro Met Leu His	Glu Tyr Leu Val Asn His	Leu		
	1040		1045		1050
Pro Leu Ala Val	Asn Asn Asp Thr	Ser Glu Tyr Thr Met Leu	Ala		
	1055		1060		1065
Pro Leu Asp Pro	Leu Gly His Asn	Tyr Gly Ile Tyr Thr Val	Thr		
	1070		1075		1080
Asp Gln Asp Pro	Arg Thr Ala Lys	Glu Ile Ala Leu Gly Arg	Cys		
	1085		1090		1095
Phe Asp Gly Thr	Ser Asp Gly Ser	Ser Arg Ile Met Lys Ser	Asn		
	1100		1105		1110
Val Gly Val Ala	Leu Thr Phe Asn	Cys Val Glu Arg Gln Val	Gly		
	1115		1120		1125
Arg Gln Ser Ala	Phe Gln Tyr Leu	Gln Ser Thr Pro Ala Gln	Ser		
	1130		1135		1140
Pro Ala Ala Gly	Thr Val Gln Gly	Arg Val Pro Ser Arg Arg	Gln		
	1145		1150		1155
Gln Arg Ala Ser	Arg Gly Gly Gln	Arg Gln Gly Gly Val Val	Ala		
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ttattttgtc ctctttcggt ctgttttgtt tcaactgtgca gagattttct 2450
tgtaagggca acgaacgtgc tggcatcaaa gaatatcagt ttacatatat 2500
aacaagtgtg ataagattcc accaaaggac attctaaatg tttcttttgt 2550
gctttaacac tggaagattt aaagaataaa aactcctgca taaacgattt 2600
caggaatttg tattgcaatt tcttaagatg aaaggaacag ccaccaagca 2650
gtttcacact cactttactg atttctgtgt ggactgagta cattcagctg 2700
acgaatttag ttcccaggaa gatggattga tgttcactag cttggacaac 2750
ttctgcaaaa tatgagacta tttccacttg ggaaaaatta caacagcaaa 2800
aaaaaaaaa aaaaaaaaaa 2819

<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

Met	Tyr	Leu	Ser	Arg	Ser	Leu	Ser	Ile	His	Ala	Leu	Trp	Val	Thr
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Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
				20					25					30
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Glu	Gly	Lys	Val	Trp
				35					40					45
Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
				50					55					60
Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
				65					70					75
Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn

	80		85		90
Glu Cys Asp Ala	Ser 95	Thr Pro Glu Leu	Ala 100	His Pro Pro Glu	Leu 105
Met Phe Asp Phe	Glu 110	Gly Arg His Pro	Ser 115	Thr Phe Trp Gln	Ser 120
Ala Thr Trp Lys	Glu 125	Tyr Pro Lys Pro	Leu 130	Gln Val Asn Ile	Thr 135
Leu Ser Trp Ser	Lys 140	Thr Ile Glu Leu	Thr 145	Asp Asn Ile Val	Ile 150
Thr Phe Glu Ser	Gly 155	Arg Pro Asp Gln	Met 160	Ile Leu Glu Lys	Ser 165
Leu Asp Tyr Gly	Arg 170	Thr Trp Gln Pro	Tyr 175	Gln Tyr Tyr Ala	Thr 180
Asp Cys Leu Asp	Ala 185	Phe His Met Asp	Pro 190	Lys Ser Val Lys	Asp 195
Leu Ser Gln His	Thr 200	Val Leu Glu Ile	Ile 205	Cys Thr Glu Glu	Tyr 210
Ser Thr Gly Tyr	Thr 215	Thr Asn Ser Lys	Ile 220	Ile His Phe Glu	Ile 225
Lys Asp Arg Phe	Ala 230	Leu Phe Ala Gly	Pro 235	Arg Leu Arg Asn	Met 240
Ala Ser Leu Tyr	Gly 245	Gln Leu Asp Thr	Thr 250	Lys Lys Leu Arg	Asp 255
Phe Phe Thr Val	Thr 260	Asp Leu Arg Ile	Arg 265	Leu Leu Arg Pro	Ala 270
Val Gly Glu Ile	Phe 275	Val Asp Glu Leu	His 280	Leu Ala Arg Tyr	Phe 285
Tyr Ala Ile Ser	Asp 290	Ile Lys Val Arg	Gly 295	Arg Cys Lys Cys	Asn 300
Leu His Ala Thr	Val 305	Cys Val Tyr Asp	Asn 310	Ser Lys Leu Thr	Cys 315
Glu Cys Glu His	Asn 320	Thr Thr Gly Pro	Asp 325	Cys Gly Lys Cys	Lys 330
Lys Asn Tyr Gln	Gly 335	Arg Pro Trp Ser	Pro 340	Gly Ser Tyr Leu	Pro 345
Ile Pro Lys Gly	Thr 350	Ala Asn Thr Cys	Ile 355	Pro Ser Ile Ser	Ser 360
Ile Gly Thr Asn	Val 365	Cys Asp Asn Glu	Leu 370	Leu His Cys Gln	Asn 375

Gly Gly Thr Cys His Asn Asn Val Arg Cys Leu Cys Pro Ala Ala
 380 385 390

Tyr Thr Gly Ile Leu Cys Glu Lys Leu Arg Cys Glu Glu Ala Gly
 395 400 405

Ser Cys Gly Ser Asp Ser Gly Gln Gly Ala Pro Pro His Gly Thr
 410 415 420

Pro Ala Leu Leu Leu Leu Thr Thr Leu Leu Gly Thr Ala Ser Pro
 425 430 435

Leu Val Phe

<210> 130

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 130

tcgattatgg acgaacatgg cagc 24

<210> 131

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 131

ttctgagatc cctcatcctc 20

<210> 132

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 132

aggttcaggg acagcaagtt tggg 24

<210> 133

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 133

tttgctggac ctcggctacg gaattggctt ccctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
cccacgcgtc cgggtgacct gggccgagcc ctcccggtcg gctaagattg 50
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ccgggcgagg tgtcctcatg acttctcttg tggaccatgt ccgtgatctt 150
ttttgcctgc gtggtacggg taagggatgg actgcccctc tcagcctcta 200
ctgatttttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
agtttagcct tgcgactggc ccagtatcca ggtcgagggt ctgcagaagg 300
ttgtgacttt agtatacatt tttcttcttt cggggacgtg gcctgcatgg 350
ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttcctggag 400
accctgtggg gggaattcac agcttctat gacactacct gcattggcct 450
agcctccagg ccatacgctt ttcttgagtt tgacagcatc attcagaaag 500
tgaagtggca ttttaactat gtaagtctct ctcagatgga gtgcagcttg 550
gaaaaaatte aggaggagct caagttgcag cctccagcgg ttctcactct 600
ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650
acttgagacc tgctcctaatt ttccgaatgg aaccagtga acacctgggt 700
atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750
aggagtccac cttgcagaac attctttaca ggatccaagg agctgggttct 800
gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
gagctctgat tctcccatcc gggagcagtg atgtcaaaact tctgctgctg 900
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ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
gctgttgccc acaagcgctt tttatttagg gtaaaattaa caaatccatt 1050
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atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150
gatttgatcc ccaggatcc tattttgttt aatgggcttt tctactaaaa 1200
gcataaaata ctgaggctga tttagtcagg gcaaaacat ttactttaca 1250
tattcgtttt caatacttgc tgttcatgtt acacaagctt cttacggttt 1300

tctttgtaaca ataaatattt tgagtaaata atgggtacat tttaacaaac 1350
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 135
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 20 25 30
 Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala
 35 40 45
 Gln Tyr Pro Gly Arg Gly Ser Ala Glu Gly Cys Asp Phe Ser Ile
 50 55 60
 His Phe Ser Ser Phe Gly Asp Val Ala Cys Met Ala Ile Cys Ser
 65 70 75
 Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu
 80 85 90
 Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu
 95 100 105
 Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln
 110 115 120
 Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu
 125 130 135
 Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro
 140 145 150
 Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met
 155 160 165
 Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg
 170 175 180
 Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn
 185 190 195
 Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala
 200 205 210
 Glu His Ser Leu Gln Asp Pro Arg Ser Trp Phe Cys Trp Leu Asp
 215 220 225

Gln Thr Ser

<210> 136
<211> 239
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 39, 61, 143, 209
<223> unknown base

<400> 136
tgcttcctgg agaccctgtg gtgggaattc acagcttctt atgacactac 50
ctgcattggc ntagcctcca ggccatacgc ttttcttgag tttgacagca 100
tcattcagaa agtgaagtgg cattttaact atgtaagtgc ctntcagatg 150
gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
<211> 2300
<212> DNA
<213> Homo sapiens

<400> 137
ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgctc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaagg cccctaggtc gggctctggg gcttggcggc ggcggcttcc 250
tccccgctcg tcttccccgg gccagaggc acctcggett cagtcattgt 300
gagcagagta tggaagcacc tgactacgaa gtgtatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgacctgctt caagaagcct 450
gctgagttca ccacagtggg tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgcaccttta ccctggcaat tgccctgggt gctgtcctgc 550
tcttgccctt ctccatcatc agcaatgagg tgctgtcttc cctgcctcgg 600
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650
ccttggtttt ctcttcccca acctgtccct catcttcttc atgccctttg 700

catatttctt cactgagtct gagggctttg ctggctccag aaaggggtgc 750
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ggtgctaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000
cccggctgct ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050
gaggcagccc tgacccgcag gatctgtaat cctacttctt gctggctgcc 1100
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ggctaccccc tggctatgct gtgcttctg gtgctgacgg gcctgtctgt 1250
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ctgggctcct ttggtgccgt cattcagggt gtactcatct tttacctaat 1400
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gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggc 2150

tcgggagata gattgtctcc cttgcctctg gcccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu	1	5	10	15
Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe	20	25	30	
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys	35	40	45	
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val	50	55	60	
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala	65	70	75	
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu	80	85	90	
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn	95	100	105	
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro	110	115	120	
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr	125	130	135	
Glu	Ser	Glu	Gly	Phe	Ala	Gly	Ser	Arg	Lys	Gly	Val	Leu	Gly	Arg	140	145	150	
Val	Tyr	Glu	Thr	Val	Val	Met	Leu	Met	Leu	Leu	Thr	Leu	Leu	Val	155	160	165	
Leu	Gly	Met	Val	Trp	Val	Ala	Ser	Ala	Ile	Val	Asp	Lys	Asn	Lys	170	175	180	
Ala	Asn	Arg	Glu	Ser	Leu	Tyr	Asp	Phe	Trp	Glu	Tyr	Tyr	Leu	Pro	185	190	195	
Tyr	Leu	Tyr	Ser	Cys	Ile	Ser	Phe	Leu	Gly	Val	Leu	Leu	Leu	Leu	200	205	210	
Val	Cys	Thr	Pro	Leu	Gly	Leu	Ala	Arg	Met	Phe	Ser	Val	Thr	Gly	215	220	225	
Lys	Leu	Leu	Val	Lys	Pro	Arg	Leu	Leu	Glu	Asp	Leu	Glu	Glu	Gln				

	230		235		240
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg	Ile		
	245	250	255		
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu	Leu		
	260	265	270		
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu	Glu		
	275	280	285		
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr	Pro		
	290	295	300		
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val	Leu		
	305	310	315		
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala	Ala		
	320	325	330		
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser	Phe		
	335	340	345		
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu	Ile		
	350	355	360		
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser	Pro		
	365	370	375		
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met	Thr		
	380	385	390		
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser	Ala		
	395	400	405		
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp	Leu		
	410	415	420		
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr	Ile		
	425	430	435		
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu	Cys		
	440	445	450		
Leu Val Lys Thr	Phe Thr Ala Ala Val	Arg Ala Glu Leu Ile	Arg		
	455	460	465		
Ala Phe Gly Leu	Asp Arg Leu Pro Leu	Pro Val Ser Gly Phe	Pro		
	470	475	480		
Gln Ala Ser Arg	Lys Thr Gln His Gln				
	485				

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
<221> unsure
<222> 53, 57
<223> unknown base

<400> 139
ggctgccgag ggaaggcccc ttgggttggt cttgggttgct tggcggcggc 50
ggnnttctcc ccgctcgtcc tccccgggcc cagaggcacc tcggcttcag 100
tcattgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
gagaacagct attccacgag aggatccgcg agtgtattat atcaacactt 200
ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250
gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140
<211> 526
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 197, 349
<223> unknown base

<400> 140
gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
aggcgggtggg gcctgccctt taaggggcggg gcgtccggac gactgtatct 100
gagccccaga ctgccccgag tttctgtcgc aggctgcgag gaaaggcccc 150
taggctgggt ctggtgcttg gcggcggcgg cttcctcccc gttgtctctc 200
ccggggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300
atccgcgagt gtattatata aacacttctg ttgcaaacac tgtacatcnt 350
ctgccacatc ttctgaccc gcttcaagaa gcctgctgag ttcaccacag 400
tggtatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450
tttaccctgg caattgccct ggggtgctgtc ctgctcctgc cttctctcat 500
catcagcaat gaggtgctgc actccc 526

<210> 141
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
 gactgtatct gagccccaga ctgc 24

<210> 142
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 142
 tcagcaatga ggtgctgctc 20

<210> 143
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 143
 tgaggaagat gagggacagg ttgg 24

<210> 144
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 144
 tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 145
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 caaacctggt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
 tgggtccaggt cttcatgctg ctgtgggtga tattactggg cctggctcct 150
 gtcagtggac agtttgcaag gacaccagc cccattattt tcctccagcc 200
 tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250
 gatttcgctt ctactcacca cagaaaacaa aatggtagca tcggtacctt 300
 gggaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc aggccaggg ctcccctctc agtagccctg 400

tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
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 aaggagactc tgtggttctg aggtgccggg caaaggcggg agtaacactg 600
 aataatacta ttacaagaa tgataatgtc ctggcattcc ttaataaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146

<211> 124

<212> PRT

<213> Homo sapiens

<400> 146

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Gln	Phe	Ala	Arg	Thr	Pro	Arg	Pro	Ile	Ile	Phe	Leu	Gln	Pro	Pro
				20					25				30	
Trp	Thr	Thr	Val	Phe	Gln	Gly	Glu	Arg	Val	Thr	Leu	Thr	Cys	Lys
				35					40				45	
Gly	Phe	Arg	Phe	Tyr	Ser	Pro	Gln	Lys	Thr	Lys	Trp	Tyr	His	Arg
				50					55				60	
Tyr	Leu	Gly	Lys	Glu	Ile	Leu	Arg	Glu	Thr	Pro	Asp	Asn	Ile	Leu
				65					70				75	
Glu	Val	Gln	Glu	Ser	Gly	Glu	Tyr	Arg	Cys	Gln	Ala	Gln	Gly	Ser
				80					85				90	
Pro	Leu	Ser	Ser	Pro	Val	His	Leu	Asp	Phe	Ser	Ser	Glu	Met	Gly
				95					100				105	
Phe	Pro	His	Ala	Ala	Gln	Ala	Asn	Val	Glu	Leu	Leu	Gly	Ser	Ser
				110					115				120	

Asp Leu Leu Thr

<210> 147

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 147

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 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150
 gaggaaccat ggctccgcag aacctgagca ccttttgcct gttgctgcta 200

tacctcatcg gggcggatgat tgccggacga gattttctata agatcttggg 250
 ggtgcctcga agtgcctcta taaaggatat taaaaaggcc tataggaaac 300
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
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<210> 148
 <211> 358
 <212> PRT
 <213> Homo sapiens

<400> 148

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				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu

260	265	270
Val Gly Phe Glu Met Asp Ile Thr His	Leu Asp Gly His Lys Val	
275	280	285
His Ile Ser Arg Asp Lys Ile Thr Arg	Pro Gly Ala Lys Leu Trp	
290	295	300
Lys Lys Gly Glu Gly Leu Pro Asn Phe	Asp Asn Asn Asn Ile Lys	
305	310	315
Gly Ser Leu Ile Ile Thr Phe Asp Val	Asp Phe Pro Lys Glu Gln	
320	325	330
Leu Thr Glu Glu Ala Arg Glu Gly Ile	Lys Gln Leu Leu Lys Gln	
335	340	345
Gly Ser Val Gln Lys Val Tyr Asn Gly	Leu Gln Gly Tyr	
350	355	

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445, 482
 <223> unknown base

<400> 149
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 gaccgagaca gaggaaccat ggttccgcag aacntgagca cnttttgcct 150
 gttgntgnta tactttcatcg gggcggtgat tgccggacga gatttntata 200
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 acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450
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 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150

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ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
gaccgggact gagtcaggag cctctcggaa gcatggagac tgtggtgatt 200
gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250
ggtgctgggt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300
gctatgattc taagcccatt gtggacctca ttggtgccat ggagaccag 350
tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccca 400
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500
aagcttggtg ccatgacaat gggctctggg gccaatga agacttcagc 550
cagtgtcagc gacatcattg tggtagccaa gcggatcagc cccagggtgg 600
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tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800
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atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

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				20					25					30

Tyr	Cys	Arg	Pro	Arg	Asp	Leu	Leu	Gln	Arg	Tyr	Asp	Ser	Lys	Pro
				35					40					45

Ile	Val	Asp	Leu	Ile	Gly	Ala	Met	Glu	Thr	Gln	Ser	Glu	Pro	Ser
				50					55					60

Glu	Leu	Glu	Leu	Asp	Asp	Val	Val	Ile	Thr	Asn	Pro	His	Ile	Glu
				65					70					75

Ala	Ile	Leu	Glu	Asn	Glu	Asp	Trp	Ile	Glu	Asp	Ala	Ser	Gly	Leu
				80					85					90

Met	Ser	His	Cys	Ile	Ala	Ile	Leu	Lys	Ile	Cys	His	Thr	Leu	Thr
				95					100					105

Glu	Lys	Leu	Val	Ala	Met	Thr	Met	Gly	Ser	Gly	Ala	Lys	Met	Lys
				110					115					120

Thr	Ser	Ala	Ser	Val	Ser	Asp	Ile	Ile	Val	Val	Ala	Lys	Arg	Ile
				125					130					135

Ser	Pro	Arg	Val	Asp	Asp	Val	Val	Lys	Ser	Met	Tyr	Pro	Pro	Leu
				140					145					150

Asp	Pro	Lys	Leu	Leu	Asp	Ala	Arg	Thr	Thr	Ala	Leu	Leu	Leu	Ser
				155					160					165

Val	Ser	His	Leu	Val	Leu	Val	Thr	Arg	Asn	Ala	Cys	His	Leu	Thr
				170					175					180

Gly	Gly	Leu	Asp	Trp	Ile	Asp	Gln	Ser	Leu	Ser	Ala	Ala	Glu	Glu
				185					190					195

His	Leu	Glu	Val	Leu	Arg	Glu	Ala	Ala	Leu	Ala	Ser	Glu	Pro	Asp
				200					205					210

Lys	Gly	Leu	Pro	Gly	Pro	Glu	Gly	Phe	Leu	Gln	Glu	Gln	Ser	Ala
				215					220					225

Ile

<210> 152
<211> 1027
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1017, 1020
<223> unknown base

<400> 152
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aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150
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attagaagag tgccagtcct tggatccctc cttaaatttac ctggaattag 450
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ggattacttt tttttgngcn cagggcc 1027

<210> 153
<211> 138
<212> PRT
<213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.

<220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr
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 20 25 30

 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45

 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

 Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
 65 70 75

 Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
 80 85 90

 Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
 95 100 105

 Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
 110 115 120

 Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
 125 130 135

 Asn Met Val

<210> 154
 <211> 405
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 66
 <223> unknown base

<400> 154
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ttaaccggat ttggagtgtt tttcctgttc tttggaatga ttctcttttt 200
tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250
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aaaatgaaag ctacaggttt ttttctgggt ggtgtatttg tagtccttat 350
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tgttc 405

<210> 155

<211> 1781

<212> DNA

<213> Homo sapiens

<400> 155

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<210> 156

<211> 378

<212> PRT

<213> Homo sapiens

<400> 156

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Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr
				20					25					30
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
				35					40					45
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
				50					55					60
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
				65					70					75
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala

	80		85		90
Ile Val Val Leu	Asn His Lys Phe Glu	Ile Asp Phe Leu Cys Gly			
	95	100			105
Trp Ser Leu Ser	Glu Arg Phe Gly Leu	Leu Gly Gly Ser Lys Val			
	110	115			120
Leu Ala Lys Lys	Glu Leu Ala Tyr Val	Pro Ile Ile Gly Trp Met			
	125	130			135
Trp Tyr Phe Thr	Glu Met Val Phe Cys	Ser Arg Lys Trp Glu Gln			
	140	145			150
Asp Arg Lys Thr	Val Ala Thr Ser Leu	Gln His Leu Arg Asp Tyr			
	155	160			165
Pro Glu Lys Tyr	Phe Phe Leu Ile His	Cys Glu Gly Thr Arg Phe			
	170	175			180
Thr Glu Lys Lys	His Glu Ile Ser Met	Gln Val Ala Arg Ala Lys			
	185	190			195
Gly Leu Pro Arg	Leu Lys His His Leu	Leu Pro Arg Thr Lys Gly			
	200	205			210
Phe Ala Ile Thr	Val Arg Ser Leu Arg	Asn Val Val Ser Ala Val			
	215	220			225
Tyr Asp Cys Thr	Leu Asn Phe Arg Asn	Asn Glu Asn Pro Thr Leu			
	230	235			240
Leu Gly Val Leu	Asn Gly Lys Lys Tyr	His Ala Asp Leu Tyr Val			
	245	250			255
Arg Arg Ile Pro	Leu Glu Asp Ile Pro	Glu Asp Asp Asp Glu Cys			
	260	265			270
Ser Ala Trp Leu	His Lys Leu Tyr Gln	Glu Lys Asp Ala Phe Gln			
	275	280			285
Glu Glu Tyr Tyr	Arg Thr Gly Thr Phe	Pro Glu Thr Pro Met Val			
	290	295			300
Pro Pro Arg Arg	Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp Ala			
	305	310			315
Ser Leu Val Leu	Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met Ile			
	320	325			330
Arg Ser Gly Ser	Ser Leu Thr Leu Ala	Ser Phe Ile Leu Val Phe			
	335	340			345
Phe Val Ala Ser	Val Gly Val Arg Trp	Met Ile Gly Val Thr Glu			
	350	355			360
Ile Asp Lys Gly	Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln Lys			
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Leu Asn Asp

<210> 157

<211> 1849

<212> DNA

<213> Homo sapiens

<400> 157

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<210> 158
 <211> 409
 <212> PRT
 <213> Homo sapiens

<400> 158
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 35 40 45
 Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp
 50 55 60
 Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn
 65 70 75
 Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser
 80 85 90
 Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His
 95 100 105
 Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn
 110 115 120
 Leu Gln Glu His Phe Ser Asn Gln Asp Leu Val Phe Leu Leu Leu
 125 130 135
 Thr Pro Ser Ile Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu

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His Ser Leu Tyr	Lys Pro Gln Lys Gly	Leu Phe His Arg Val	Pro		
	155	160	165		
Leu Val Val Ala	Asn Leu Gly Met Ser	Glu Gln Leu Gly Tyr	Lys		
	170	175	180		
Thr Val Ser Gly	Ser Cys Met Ser Thr	Gly Phe Ser Arg Ala	Val		
	185	190	195		
Gln Thr His Ser	Ser Lys Phe Phe Glu	Glu Asp Gly Ser Leu	Lys		
	200	205	210		
Glu Val His Lys	Ile Asn Glu Met Tyr	Ala Ser Leu Gln Glu	Glu		
	215	220	225		
Leu Lys Ser Ile	Cys Lys Lys Val Glu	Asp Ser Glu Gln Ala	Val		
	230	235	240		
Asp Lys Leu Val	Lys Asp Val Asn Arg	Leu Lys Arg Glu Ile	Glu		
	245	250	255		
Lys Arg Arg Gly	Ala Gln Ile Gln Ala	Ala Arg Glu Lys Asn	Ile		
	260	265	270		
Gln Lys Asp Pro	Gln Glu Asn Ile Phe	Leu Cys Gln Ala Leu	Arg		
	275	280	285		
Thr Phe Phe Pro	Asn Ser Glu Phe Leu	His Ser Cys Val Met	Ser		
	290	295	300		
Leu Lys Asn Arg	His Val Ser Lys Ser	Ser Cys Asn Tyr Asn	His		
	305	310	315		
His Leu Asp Val	Val Asp Asn Leu Thr	Leu Met Val Glu His	Thr		
	320	325	330		
Asp Ile Pro Glu	Ala Ser Pro Ala Ser	Thr Pro Gln Ile Ile	Lys		
	335	340	345		
His Lys Ala Leu	Asp Leu Asp Asp Arg	Trp Gln Phe Lys Arg	Ser		
	350	355	360		
Arg Leu Leu Asp	Thr Gln Asp Lys Arg	Ser Lys Ala Asn Thr	Gly		
	365	370	375		
Ser Ser Asn Gln	Asp Lys Ala Ser Lys	Met Ser Ser Pro Glu	Thr		
	380	385	390		
Asp Glu Glu Ile	Glu Lys Met Lys Gly	Phe Gly Glu Tyr Ser	Arg		
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<210> 159
 <211> 2651

<212> DNA
<213> Homo sapiens

<400> 159

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c 2651

<210> 160
<211> 556
<212> PRT
<213> Homo sapiens

<400> 160

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Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn	35	40	45	
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys	50	55	60	
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr	65	70	75	
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln	80	85	90	
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe	95	100	105	
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	110	115	120	
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn	125	130	135	
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr	140	145	150	
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp	155	160	165	
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr	170	175	180	
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu	185	190	195	
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln	200	205	210	
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu	215	220	225	
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro	230	235	240	
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser	245	250	255	
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys	260	265	270	
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp	275	280	285	

Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu	290	295	300
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile	305	310	315
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser	320	325	330
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys	335	340	345
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala	350	355	360
Phe	Ser	Ala	Arg	Phe	Arg	Pro	His	His	Pro	Glu	Glu	Arg	Pro	Thr	365	370	375
Thr	Ala	Ala	Gly	Thr	Ser	Leu	Asp	Arg	Leu	Val	Thr	Asp	Val	Lys	380	385	390
Glu	Lys	Leu	Lys	Gln	Ala	Lys	Lys	Phe	Trp	Ser	Ser	Leu	Pro	Ser	395	400	405
Asn	Val	Cys	Asn	Asp	Glu	Arg	Met	Ala	Ala	Gly	Asn	Gly	Asn	Glu	410	415	420
Asp	Asp	Cys	Trp	Asn	Gly	Lys	Gly	Lys	Ser	Arg	Tyr	Leu	Phe	Ala	425	430	435
Val	Thr	Gly	Asn	Gly	Leu	Ala	Asn	Gln	Gly	Asn	Asn	Pro	Glu	Val	440	445	450
Gln	Val	Asp	Thr	Ser	Lys	Pro	Asp	Ile	Leu	Ile	Leu	Arg	Gln	Ile	455	460	465
Met	Ala	Leu	Arg	Val	Met	Thr	Ser	Lys	Met	Lys	Asn	Ala	Tyr	Asn	470	475	480
Gly	Asn	Asp	Val	Asp	Phe	Phe	Asp	Ile	Ser	Asp	Glu	Ser	Ser	Gly	485	490	495
Glu	Gly	Ser	Gly	Ser	Gly	Cys	Glu	Tyr	Gln	Gln	Cys	Pro	Ser	Glu	500	505	510
Phe	Asp	Tyr	Asn	Ala	Thr	Asp	His	Ala	Gly	Lys	Ser	Ala	Asn	Glu	515	520	525
Lys	Ala	Asp	Ser	Ala	Gly	Val	Arg	Pro	Gly	Ala	Gln	Ala	Tyr	Leu	530	535	540
Leu	Thr	Val	Phe	Cys	Ile	Leu	Phe	Leu	Val	Met	Gln	Arg	Glu	Trp	545	550	555

Arg

<210> 161

<211> 23
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 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

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 <210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 162
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 <210> 163
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 163
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 <210> 164
 <211> 870
 <212> DNA
 <213> Homo sapiens

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 cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
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 gtgagtgcaa agattgggtc ctgagagccc cgagaagaaa attcatgaca 350
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 ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500

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 ctgaaagatt ccaggaaact gtagcttctt agctagtgtc atttaacctt 800
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<210> 165
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 165
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 20 25 30
 Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu
 35 40 45
 Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro
 50 55 60
 Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys
 65 70 75
 Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln
 80 85 90
 Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln
 95 100 105
 Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu
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<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

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a 551

<210> 167

<211> 87

<212> PRT

<213> Homo sapiens

<400> 167

Met	Ala	Val	Leu	Val	Leu	Arg	Leu	Thr	Val	Val	Leu	Gly	Leu	Leu
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Val	Leu	Phe	Leu	Thr	Cys	Tyr	Ala	Asp	Asp	Lys	Pro	Asp	Lys	Pro
				20					25					30
Asp	Asp	Lys	Pro	Asp	Asp	Ser	Gly	Lys	Asp	Pro	Lys	Pro	Asp	Phe
				35					40					45
Pro	Lys	Phe	Leu	Ser	Leu	Leu	Gly	Thr	Glu	Ile	Ile	Glu	Asn	Ala
				50					55					60
Val	Glu	Phe	Ile	Leu	Arg	Ser	Met	Ser	Arg	Ser	Thr	Gly	Phe	Met
				65					70					75
Glu	Phe	Asp	Asp	Asn	Glu	Gly	Lys	His	Ser	Ser	Lys			
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<210> 168

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 168

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gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggetctgc 150
tgggctgctg gcagccctg tgcaaaagct acttcccta cctgatggcc 200
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 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
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 taataaatag acgaaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

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Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro
				20				25					30	

Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	35	40	45
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	50	55	60
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	65	70	75
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	80	85	90
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	95	100	105
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	110	115	120
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	125	130	135
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	140	145	150
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	155	160	165
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	170	175	180
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	185	190	195
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	200	205	210
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	215	220	225
Pro	Pro	Pro	Leu	Lys	Trp	Leu	Pro	Val	Gly	Pro	His	Ile	Met	Gly	230	235	240
Lys	Ala	Val	Lys	Gln	Ser	Phe	Pro	Ser	Ser	Lys	Ala	Leu	Ile	Cys	245	250	255
Ser	Phe	Pro	Ser	Leu	Gln	Leu	Glu	Gln	Ala	Thr	His	Gln	Pro	Ile	260	265	270
Tyr	Leu	Pro	Leu	Arg	Gly	Thr									275		

<210> 170

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 170

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ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250
aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
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cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400
tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450
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ggaaggaaaa gttaaaggagg atcctgacca gggggaatcc atgaaacctt 600
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gccatataca tggatgatga tgtaattgtg caagggtgata ttcttgccct 700
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aattacattg gctatcttga ctataaaaag gaaagaatcc gtaagctttc 850
catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900
tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000
cacaacacct cctctgctta tcgtatttta tcaacagcac tctaccatcg 1050
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gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggg 1200
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ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500

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<210> 171
 <211> 371
 <212> PRT
 <213> Homo sapiens

<400> 171
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 Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser
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 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro
 35 40 45
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp
 50 55 60
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp
 65 70 75
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn
 80 85 90
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr
 95 100 105
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser
 110 115 120
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly
 125 130 135
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu
 140 145 150
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys
 155 160 165
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile
 170 175 180
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala
 185 190 195
 Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val Val Ile Arg
 200 205 210
 Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp Tyr Lys
 215 220 225
 Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys Ser

	230		235		240
Phe Asn Pro Gly	Val	Phe Val Ala Asn	Leu Thr Glu Trp Lys	Arg	
	245		250		255
Gln Asn Ile Thr	Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn	Val		
	260		265		270
Glu Glu Gly Leu	Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr	Thr		
	275		280		285
Pro Pro Leu Leu	Ile Val Phe Tyr Gln	Gln His Ser Thr Ile	Asp		
	290		295		300
Pro Met Trp Asn	Val Arg His Leu Gly	Ser Ser Ala Gly Lys	Arg		
	305		310		315
Tyr Ser Pro Gln	Phe Val Lys Ala Ala	Lys Leu Leu His Trp	Asn		
	320		325		330
Gly His Leu Lys	Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp	Val		
	335		340		345
Trp Glu Lys Trp	Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn	Leu		
	350		355		360
Ile Arg Arg Tyr	Thr Glu Ile Ser Asn	Ile Lys			
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<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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aggttacaga ttcaggaatt ntaggnccctc aacctntaga ntttgtccca 100

aatgttctcc gacatgcagt agatgggaga caagaggaga ttctgtggt 150

catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200

gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250

aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300

aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400

gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450

catggatgat gatgtaattg tgcaaggtga tattcttggc ctttacaata 500
cagcactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173

<211> 1866

<212> DNA

<213> *Homo sapiens*

<400> 173

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aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150
gctgagctgg cagggcgggt cggggcgcggt gctgcatccg catctcctcc 200
atcgctgca gtaagggcgg ccgcggcgag cctttgaggg gaacgacttg 250
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tcacatcact ttccgatcac ttcaaagtgg ttaaaaacta atatttatat 350
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gggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650
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tgcattttca gaagattgtg attcagcctc tactaaagtt gtcattccgtg 1000
gagcaggaaa ccagtacaat tacattgggt atcttgacta taaaaaggaa 1050
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agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150

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tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800
aacctgtggc ctgatctgta aataaaaactt acatttttca ataggtaaaa 1850
aaaaaaaaa aaaaaa 1866

<210> 174

<211> 823

<212> DNA

<213> Homo sapiens

<400> 174

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ctcaccattg aggcagctcc actgtctgtg ctgggtctgag ggtgctgcct 150
gtcatggggg cagccatctc ccaggggggc ctcacgccca tcgtctgcaa 200
cggctctcgtg ggcttcttgc tgctgctgct ctgggtcacc ctctgctggg 250
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actccagccc tggcccctgt cctgagaagg cccaccacc ccagaagccc 350
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cagagttcag ccagcctggg gtccagaact caagagtccg cctgcttgga 500
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agtggcccta aggagatggg cctgggggtgg gggccttatga gttggtgcta 600
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 gccgggtcca ctctttccct aggctgagca cctctaggcc ctctaggttg 700
 gggaagcaaaa ctggaacca tggcaataat aggaggggtgt ccaggctggg 750
 ccctccctt ggtcctccca gtgtttgctg gataataaat ggaactatgg 800
 ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met	Gly	Ala	Ala	Ile	Ser	Gln	Gly	Ala	Leu	Ile	Ala	Ile	Val	Cys
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Asn	Gly	Leu	Val	Gly	Phe	Leu	Leu	Leu	Leu	Leu	Trp	Val	Ile	Leu
				20					25					30
Cys	Trp	Ala	Cys	His	Ser	Arg	Leu	Pro	Thr	Leu	Thr	Leu	Ser	Leu
				35					40					45
Asn	Pro	Val	Pro	Thr	Pro	Ala	Leu	Ala	Pro	Val	Leu	Arg	Arg	Pro
				50					55					60
His	His	Pro	Arg	Ser	Pro	Ala	Met	Lys	Ala	Ala	Thr	Cys	Cys	Ser
				65					70					75
Pro	Glu	Gly	Pro	Trp	Pro	Ser	Leu	Glu	Pro	Arg	Thr			
				80					85					

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

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 tgtccctcaa acacctgagt gctactccct atttgcatct gttttgataa 150
 atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200
 gatacaatcc ttggcctgtg taccctcgca ttagccttgt ctttggccat 250
 gatgtttacc ttcagattca tcaccacct tctgggtcac attttcattt 300
 cattgggttat tttgggattg ttgtttgtct gcggtgtttt atgggtggctg 350
 tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400

aaatatgaag tgcgtgctgg gggtttgctat cgtatccaca ggcatcacgg 450
 cagtgtctgct cgtcttgatt tttgtttctca gaaagagaat aaaattgaca 500
 gttgagctttt tccaaatcac aaataaagcc atcagcagtg ctcccttctt 550
 gctgttccag ccactgtgga catttgccat cctcattttc ttctgggtcc 600
 tctgggtggc tgtgctgctg agcctgggaa ctgcaggagc tgcccagggt 650
 atggaaggcg gccaaagtga atataagccc ctttcgggca ttcggtacat 700
 gtggtcgtac catttaattg gcctcatctg gactagtga ttcatccttg 750
 cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800
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 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100
 gatgcattca aaatcttgtc caagaactca agtcacttta catctattaa 1150
 ctgcttttga gacttcataa tttttctagg aaagggtgta gtggtgtgtt 1200
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 ttcctcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

 <400> 177

Met	Ser	Gly	Arg	Asp	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu	1	5	10	15
Ala	Leu	Ser	Leu	Ala	Met	Met	Phe	Thr	Phe	Arg	Phe	Ile	Thr	Thr	20	25	30	
Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Val	Ile	Leu	Gly	Leu	Leu	35	40	45	
Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr	Asn	50	55	60	
Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys	65	70	75	
Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu	80	85	90	
Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr	Val	95	100	105	
Glu	Leu	Phe	Gln	Ile	Thr	Asn	Lys	Ala	Ile	Ser	Ser	Ala	Pro	Phe	110	115	120	
Leu	Leu	Phe	Gln	Pro	Leu	Trp	Thr	Phe	Ala	Ile	Leu	Ile	Phe	Phe	125	130	135	
Trp	Val	Leu	Trp	Val	Ala	Val	Leu	Leu	Ser	Leu	Gly	Thr	Ala	Gly	140	145	150	
Ala	Ala	Gln	Val	Met	Glu	Gly	Gly	Gln	Val	Glu	Tyr	Lys	Pro	Leu	155	160	165	
Ser	Gly	Ile	Arg	Tyr	Met	Trp	Ser	Tyr	His	Leu	Ile	Gly	Leu	Ile	170	175	180	
Trp	Thr	Ser	Glu	Phe	Ile	Leu	Ala	Cys	Gln	Gln	Met	Thr	Ile	Ala	185	190	195	
Gly	Ala	Val	Val	Thr	Cys	Tyr	Phe	Asn	Arg	Ser	Lys	Asn	Asp	Pro	200	205	210	
Pro	Asp	His	Pro	Ile	Leu	Ser	Ser	Leu	Ser	Ile	Leu	Phe	Phe	Tyr	215	220	225	
His	Gln	Gly	Thr	Val	Val	Lys	Gly	Ser	Phe	Leu	Ile	Ser	Val	Val	230	235	240	
Arg	Ile	Pro	Arg	Ile	Ile	Val	Met	Tyr	Met	Gln	Asn	Ala	Leu	Lys	245	250	255	
Glu	Gln	Gln	His	Gly	Ala	Leu	Ser	Arg	Tyr	Leu	Phe	Arg	Cys	Cys	260	265	270	
Tyr	Cys	Cys	Phe	Trp	Cys	Leu	Asp	Lys	Tyr	Leu	Leu	His	Leu	Asn	275	280	285	
Gln	Asn	Ala	Tyr	Thr	Thr	Thr	Ala	Ile	Asn	Gly	Thr	Asp	Phe	Cys				

	290		295		300
Thr Ser Ala Lys Asp Ala Phe Lys Ile Leu Ser Lys Asn Ser Ser	305		310		315
His Phe Thr Ser Ile Asn Cys Phe Gly Asp Phe Ile Ile Phe Leu	320		325		330
Gly Lys Val Leu Val Val Cys Phe Thr Val Phe Gly Gly Leu Met	335		340		345
Ala Phe Asn Tyr Asn Arg Ala Phe Gln Val Trp Ala Val Pro Leu	350		355		360
Leu Leu Val Ala Phe Phe Ala Tyr Leu Val Ala His Ser Phe Leu	365		370		375
Ser Val Phe Glu Thr Val Leu Asp Ala Leu Phe Leu Cys Phe Ala	380		385		390
Val Asp Leu Glu Thr Asn Asp Gly Ser Ser Glu Lys Pro Tyr Phe	395		400		405
Met Asp Gln Glu Phe Leu Ser Phe Val Lys Arg Ser Asn Lys Leu	410		415		420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu	425		430		435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg	440		445		

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
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ggaaggttgc tggacagtct gggtacaaaag ggagttattc caacgggtgtc 550
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<210> 179

<211> 678

<212> PRT

<213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met
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Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr
				20				25					30	
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn
				35				40					45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
				50				55					60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
				65				70					75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
				80				85					90	

His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	
				95					100					105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	
				110					115					120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	
				125					130					135	
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	
				140					145					150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	
				155					160					165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	
				170					175					180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	
				185					190					195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	
				200					205					210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	
				215					220					225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	
				230					235					240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	
				245					250					255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	
				260					265					270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	
				275					280					285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly	
				290					295					300	
Ser	Thr	Ser	Ile	Gly	Lys	Arg	Arg	Phe	Arg	Ile	Gln	Lys	Gln	Leu	
				305					310					315	
Leu	Ala	Asp	Val	Ala	Gln	Ala	Leu	Asp	Ile	Gly	Pro	Ala	Gly	Pro	
				320					325					330	
Leu	Met	Gly	Val	Val	Gln	Tyr	Gly	Asp	Asn	Pro	Ala	Thr	His	Phe	
				335					340					345	
Asn	Leu	Lys	Thr	His	Thr	Asn	Ser	Arg	Asp	Leu	Lys	Thr	Ala	Ile	
				350					355					360	
Glu	Lys	Ile	Thr	Gln	Arg	Gly	Gly	Leu	Ser	Asn	Val	Gly	Arg	Ala	
				365					370					375	
Ile	Ser	Phe	Val	Thr	Lys	Asn	Phe	Phe	Ser	Lys	Ala	Asn	Gly	Asn	

	380		385		390
Arg Ser Gly Ala	Pro Asn Val Val Val	Val Met Val Asp Gly Trp			
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Pro Thr Asp Lys	Val Glu Glu Ala Ser	Arg Leu Ala Arg Glu Ser			
	410	415			420
Gly Ile Asn Ile	Phe Phe Ile Thr Ile	Glu Gly Ala Ala Glu Asn			
	425	430			435
Glu Lys Gln Tyr	Val Val Glu Pro Asn	Phe Ala Asn Lys Ala Val			
	440	445			450
Cys Arg Thr Asn	Gly Phe Tyr Ser Leu	His Val Gln Ser Trp Phe			
	455	460			465
Gly Leu His Lys	Thr Leu Gln Pro Leu	Val Lys Arg Val Cys Asp			
	470	475			480
Thr Asp Arg Leu	Ala Cys Ser Lys Thr	Cys Leu Asn Ser Ala Asp			
	485	490			495
Ile Gly Phe Val	Ile Asp Gly Ser Ser	Ser Val Gly Thr Gly Asn			
	500	505			510
Phe Arg Thr Val	Leu Gln Phe Val Thr	Asn Leu Thr Lys Glu Phe			
	515	520			525
Glu Ile Ser Asp	Thr Asp Thr Arg Ile	Gly Ala Val Gln Tyr Thr			
	530	535			540
Tyr Glu Gln Arg	Leu Glu Phe Gly Phe	Asp Lys Tyr Ser Ser Lys			
	545	550			555
Pro Asp Ile Leu	Asn Ala Ile Lys Arg	Val Gly Tyr Trp Ser Gly			
	560	565			570
Gly Thr Ser Thr	Gly Ala Ala Ile Asn	Phe Ala Leu Glu Gln Leu			
	575	580			585
Phe Lys Lys Ser	Lys Pro Asn Lys Arg	Lys Leu Met Ile Leu Ile			
	590	595			600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val	Arg Ile Pro Ala Met Ala			
	605	610			615
Ala His Leu Lys	Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp			
	620	625			630
Ala Ala Gln Glu	Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg			
	635	640			645
Asp His Ser Phe	Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr			
	650	655			660
Val Pro Arg Ile	Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln			
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Pro Arg Asn

<210> 180

<211> 1759

<212> DNA

<213> Homo sapiens

<400> 180

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<210> 181

<211> 541

<212> PRT

<213> Homo sapiens

<400> 181

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Leu	Pro	Gln	His	His	Gly	Ala	Pro	Gly	Pro	Asp	Gly	Ser	Ala	Pro	20	25	30	
Asp	Pro	Ala	His	Tyr	Ser	Phe	Ser	Leu	Thr	Leu	Ile	Asp	Ala	Leu	35	40	45	
Asp	Thr	Leu	Leu	Ile	Leu	Gly	Asn	Val	Ser	Glu	Phe	Gln	Arg	Val	50	55	60	
Val	Glu	Val	Leu	Gln	Asp	Ser	Val	Asp	Phe	Asp	Ile	Asp	Val	Asn	65	70	75	
Ala	Ser	Val	Phe	Glu	Thr	Asn	Ile	Arg	Val	Val	Gly	Gly	Leu	Leu	80	85	90	
Ser	Ala	His	Leu	Leu	Ser	Lys	Lys	Ala	Gly	Val	Glu	Val	Glu	Ala	95	100	105	
Gly	Trp	Pro	Cys	Ser	Gly	Pro	Leu	Leu	Arg	Met	Ala	Glu	Glu	Ala	110	115	120	
Ala	Arg	Lys	Leu	Leu	Pro	Ala	Phe	Gln	Thr	Pro	Thr	Gly	Met	Pro	125	130	135	
Tyr	Gly	Thr	Val	Asn	Leu	Leu	His	Gly	Val	Asn	Pro	Gly	Glu	Thr	140	145	150	

Pro Val Thr Cys	Thr Ala Gly Ile Gly	Thr Phe Ile Val Glu Phe	155	160	165
Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val	170	175	180
Ala Arg Val Ala	Leu Met Arg Leu Trp	Glu Ser Arg Ser Asp Ile	185	190	195
Gly Leu Val Gly	Asn His Ile Asp Val	Leu Thr Gly Lys Trp Val	200	205	210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly	Val Asp Ser Tyr Phe Glu	215	220	225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu	Gln Asp Lys Lys Leu Met	230	235	240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala	Ile Arg Asn Tyr Thr Arg	245	250	255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln	Met Tyr Lys Gly Thr Val	260	265	270
Ser Met Pro Val	Phe Gln Ser Leu Glu	Ala Tyr Trp Pro Gly Leu	275	280	285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn	Ala Met Arg Thr Phe Leu	290	295	300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe	Gly Gly Leu Pro Glu Phe	305	310	315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val	Glu Lys Arg Glu Gly Tyr	320	325	330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser	Ala Met Tyr Leu Tyr Arg	335	340	345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu	Leu Gly Arg Asp Ala Val	350	355	360
Glu Ser Ile Glu	Lys Ile Ser Lys Val	Glu Cys Gly Phe Ala Thr	365	370	375
Ile Lys Asp Leu	Arg Asp His Lys Leu	Asp Asn Arg Met Glu Ser	380	385	390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr	Leu Tyr Leu Leu Phe Asp	395	400	405
Pro Thr Asn Phe	Ile His Asn Asn Gly	Ser Thr Phe Asp Ala Val	410	415	420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu	Gly Ala Gly Gly Tyr Ile	425	430	435
Phe Asn Thr Glu	Ala His Pro Ile Asp	Leu Ala Ala Leu His Cys			

	440		445		450									
Cys	Gln	Arg	Leu	Lys	Glu	Glu	Gln	Trp	Glu	Val	Glu	Asp	Leu	Met
				455					460					465
Arg	Glu	Phe	Tyr	Ser	Leu	Lys	Arg	Ser	Arg	Ser	Lys	Phe	Gln	Lys
				470					475					480
Asn	Thr	Val	Ser	Ser	Gly	Pro	Trp	Glu	Pro	Pro	Ala	Arg	Pro	Gly
				485					490					495
Thr	Leu	Phe	Ser	Pro	Glu	Asn	His	Asp	Gln	Ala	Arg	Glu	Arg	Lys
				500					505					510
Pro	Ala	Lys	Gln	Lys	Val	Pro	Leu	Leu	Ser	Cys	Pro	Ser	Gln	Pro
				515					520					525
Phe	Thr	Ser	Lys	Leu	Ala	Leu	Leu	Gly	Gln	Val	Phe	Leu	Asp	Ser
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Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

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 gctttatttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250
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aaaaaa 2056

<210> 183
<211> 311
<212> PRT
<213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137
 <223> N-glycosylation sites.

<220>
 <221> Tissue factor proteins homology
 <222> 92-119
 <223> Tissue factor proteins homology

<220>
 <221> Transmembrane domain
 <222> 230-255
 <223> Transmembrane domain

<220>
 <221> Integrins alpha chain protein homology
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 <223> Integrins alpha chain protein homology

<400> 183
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 35 40 45
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro
 50 55 60
 Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu
 65 70 75
 Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser
 80 85 90
 Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala
 95 100 105
 Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
 110 115 120
 Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser
 125 130 135
 Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe
 140 145 150
 His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe
 155 160 165

Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	
Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
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<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
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 tgaccac 808

<210> 185

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 185

aggcttcgct gcgactagac ctc 23

<210> 186

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 186

ccaggtcggg taaggatggt tgag 24

<210> 187

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 187

tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188

<211> 1227

<212> DNA

<213> Homo sapiens

<400> 188

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ggcagcggcg tggtgctcc tgtgggctgc ggctgcgcg cagcaggagc 100


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<210> 189

<211> 187

<212> PRT

<213> Homo sapiens

<400> 189

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      20             25             30

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Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly	
				35					40					45	
Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr	
				50					55					60	
Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Leu	Gln	Arg	Asp	Leu	Gly	
				65					70					75	
Pro	His	His	Phe	Asn	Val	Leu	Ala	Phe	Pro	Cys	Asn	Gln	Phe	Gly	
				80					85					90	
Gln	Gln	Glu	Pro	Asp	Ser	Asn	Lys	Glu	Ile	Glu	Ser	Phe	Ala	Arg	
				95					100					105	
Arg	Thr	Tyr	Ser	Val	Ser	Phe	Pro	Met	Phe	Ser	Lys	Ile	Ala	Val	
				110					115					120	
Thr	Gly	Thr	Gly	Ala	His	Pro	Ala	Phe	Lys	Tyr	Leu	Ala	Gln	Thr	
				125					130					135	
Ser	Gly	Lys	Glu	Pro	Thr	Trp	Asn	Phe	Trp	Lys	Tyr	Leu	Val	Ala	
				140					145					150	
Pro	Asp	Gly	Lys	Val	Val	Gly	Ala	Trp	Asp	Pro	Thr	Val	Ser	Val	
				155					160					165	
Glu	Glu	Val	Arg	Pro	Gln	Ile	Thr	Ala	Leu	Val	Arg	Lys	Leu	Ile	
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<213> Artificial Sequence

<220>

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<400> 190

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<210> 191

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<212> DNA

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<400> 191

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<400> 192

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<210> 193

<211> 2187

<212> DNA

<213> Homo sapiens

<400> 193

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gggtgtccgc ttcctcagtt ccagagaggt ggatcgcatt gtctccacgc 200

ccatcggagg cctcagctac gttcaggggt gcacacaaaa gcatcttaac 250

agcaagactg tgggccagtg cctggagacc acagcacaga ggggtcccaga 300

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<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

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				20					25				30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg
				35					40				45	

Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr	
				50					55					60	
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly	
				65					70					75	
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala	
				80					85					90	
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu	
				95					100					105	
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly	
				110					115					120	
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr	
				125					130					135	
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile	
				140					145					150	
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr	
				155					160					165	
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln	
				170					175					180	
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro	
				185					190					195	
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu	
				200					205					210	
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly	
				215					220					225	
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln	
				230					235					240	
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His	
				245					250					255	
Asp	Pro	Ile	Asn	Ile	Gln	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Ser	Pro	
				260					265					270	
Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn	
				275					280					285	
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln	
				290					295					300	
Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser	
				305					310					315	
Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile	
				320					325					330	
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile	

	335		340		345
Ser Arg Glu Arg	Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met Phe			
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Val Asp Ile Leu	Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile Ser			
	365	370			375
Thr Met Cys Gly	Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro Glu			
	380	385			390
Leu Ile Arg Ala	Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu Val			
	395	400			405
Val Ala Tyr Gly	Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala His			
	410	415			420
Phe Pro Glu Asp	Thr Val Glu Gln Lys	Ala Glu Ser Val Gly Arg			
	425	430			435
Ile Met Pro His	Thr Glu Ala Arg Ile	Met Asn Met Glu Ala Gly			
	440	445			450
Thr Leu Ala Lys	Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg Gly			
	455	460			465
Tyr Cys Val Met	Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr Glu			
	470	475			480
Glu Ala Val Asp	Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val Ala			
	485	490			495
Thr Met Asn Glu	Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser Lys			
	500	505			510
Asp Met Ile Ile	Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu Leu			
	515	520			525
Glu Asp Phe Phe	His Thr His Pro Lys	Val Gln Glu Val Gln Val			
	530	535			540
Val Gly Val Lys	Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala Cys			
	545	550			555
Ile Arg Leu Lys	Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile Lys			
	560	565			570
Ala Phe Cys Lys	Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr			
	575	580			585
Ile Val Phe Val	Thr Asn Tyr Pro Leu	Thr Ile Ser Gly Lys Ile			
	590	595			600
Gln Lys Phe Lys	Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu			
	605	610			615

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<211> 642

<212> DNA
<213> Homo sapiens

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ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
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<211> 1575
<212> DNA
<213> Homo sapiens

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<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

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			20						25				30	
Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser
				35					40				45	
Pro	Asn	Lys	Met	Lys	Thr	Val	Lys	Cys	Ala	Pro	Gly	Val	Asp	Val

				50					55					60	
Cys	Thr	Glu	Ala	Val	Gly	Ala	Val	Glu	Thr	Ile	His	Gly	Gln	Phe	
				65					70					75	
Ser	Leu	Ala	Val	Arg	Gly	Cys	Gly	Ser	Gly	Leu	Pro	Gly	Lys	Asn	
				80					85					90	
Asp	Arg	Gly	Leu	Asp	Leu	His	Gly	Leu	Leu	Ala	Phe	Ile	Gln	Leu	
				95					100					105	
Gln	Gln	Cys	Ala	Gln	Asp	Arg	Cys	Asn	Ala	Lys	Leu	Asn	Leu	Thr	
				110					115					120	
Ser	Arg	Ala	Leu	Asp	Pro	Ala	Gly	Asn	Glu	Ser	Ala	Tyr	Pro	Pro	
				125					130					135	
Asn	Gly	Val	Glu	Cys	Tyr	Ser	Cys	Val	Gly	Leu	Ser	Arg	Glu	Ala	
				140					145					150	
Cys	Gln	Gly	Thr	Ser	Pro	Pro	Val	Val	Ser	Cys	Tyr	Asn	Ala	Ser	
				155					160					165	
Asp	His	Val	Tyr	Lys	Gly	Cys	Phe	Asp	Gly	Asn	Val	Thr	Leu	Thr	
				170					175					180	
Ala	Ala	Asn	Val	Thr	Val	Ser	Leu	Pro	Val	Arg	Gly	Cys	Val	Gln	
				185					190					195	
Asp	Glu	Phe	Cys	Thr	Arg	Asp	Gly	Val	Thr	Gly	Pro	Gly	Phe	Thr	
				200					205					210	
Leu	Ser	Gly	Ser	Cys	Cys	Gln	Gly	Ser	Arg	Cys	Asn	Ser	Asp	Leu	
				215					220					225	
Arg	Asn	Lys	Thr	Tyr	Phe	Ser	Pro	Arg	Ile	Pro	Pro	Leu	Val	Arg	
				230					235					240	
Leu	Pro	Pro	Pro	Glu	Pro	Thr	Thr	Val	Ala	Ser	Thr	Thr	Ser	Val	
				245					250					255	
Thr	Thr	Ser	Thr	Ser	Ala	Pro	Val	Arg	Pro	Thr	Ser	Thr	Thr	Lys	
				260					265					270	
Pro	Met	Pro	Ala	Pro	Thr	Ser	Gln	Thr	Pro	Arg	Gln	Gly	Val	Glu	
				275					280					285	
His	Glu	Ala	Ser	Arg	Asp	Glu	Glu	Pro	Arg	Leu	Thr	Gly	Gly	Ala	
				290					295					300	
Ala	Gly	His	Gln	Asp	Arg	Ser	Asn	Ser	Gly	Gln	Tyr	Pro	Ala	Lys	
				305					310					315	
Gly	Gly	Pro	Gln	Gln	Pro	His	Asn	Lys	Gly	Cys	Val	Ala	Pro	Thr	
				320					325					330	
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Leu

<210> 198

<211> 1657

<212> DNA

<213> Homo sapiens

<400> 198

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<210> 199

<211> 120

<212> PRT

<213> Homo sapiens

<400> 199

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Val	Leu	Ala	Ser	Ala	Ala	Glu	Lys	Glu	Lys	Glu	Met	Asp	Pro	Phe
				20					25					30

His	Tyr	Asp	Tyr	Gln	Thr	Leu	Arg	Ile	Gly	Gly	Leu	Val	Phe	Ala
				35					40					45

Val	Val	Leu	Phe	Ser	Val	Gly	Ile	Leu	Leu	Ile	Leu	Ser	Arg	Arg
				50					55					60

Cys	Lys	Cys	Ser	Phe	Asn	Gln	Lys	Pro	Arg	Ala	Pro	Gly	Asp	Glu
				65					70					75

Glu	Ala	Gln	Val	Glu	Asn	Leu	Ile	Thr	Ala	Asn	Ala	Thr	Glu	Pro
				80					85					90

Gln	Lys	Gln	Arg	Thr	Glu	Val	Gln	Pro	Ser	Gly	Gly	Ser	Leu	Trp
				95					100					105

Asn	Leu	Arg	Arg	Leu	Leu	Glu	Pro	Leu	Asp	Ala	Asn	Val	Asp	Ala
				110					115					120

<210> 200

<211> 415

<212> DNA

<213> Homo sapiens

<400> 200

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<211> 99
<212> PRT
<213> Homo sapiens

<400> 201
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35 40 45
Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60
Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75
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Leu Arg Ser Ala Thr Pro Asp Ala Gln
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<212> DNA
<213> Homo sapiens

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<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
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 35 40 45
 Cys Gly Phe Ala Gly His Ser
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<210> 204
 <211> 1917
 <212> DNA
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<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

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Lys	Trp	Lys	Val	Phe	Ile	Asp	Gln	Ile	Asn	Arg	Ser	Leu	Glu	Asn	
				35					40					45	
Tyr	Glu	Pro	Cys	Ser	Ser	Gln	Asn	Cys	Ser	Cys	Tyr	His	Gly	Val	
				50					55					60	
Ile	Glu	Glu	Asp	Leu	Thr	Pro	Phe	Arg	Gly	Gly	Ile	Ser	Arg	Lys	
				65					70					75	
Met	Met	Ala	Glu	Val	Val	Arg	Arg	Lys	Leu	Gly	Thr	His	Tyr	Gln	
				80					85					90	
Ile	Thr	Lys	Asn	Arg	Leu	Tyr	Arg	Glu	Asn	Asp	Cys	Met	Phe	Pro	
				95					100					105	
Ser	Arg	Cys	Ser	Gly	Val	Glu	His	Phe	Ile	Leu	Glu	Val	Ile	Gly	
				110					115					120	
Arg	Leu	Pro	Asp	Met	Glu	Met	Val	Ile	Asn	Val	Arg	Asp	Tyr	Pro	
				125					130					135	
Gln	Val	Pro	Lys	Trp	Met	Glu	Pro	Ala	Ile	Pro	Val	Phe	Ser	Phe	
				140					145					150	
Ser	Lys	Thr	Ser	Glu	Tyr	His	Asp	Ile	Met	Tyr	Pro	Ala	Trp	Thr	
				155					160					165	
Phe	Trp	Glu	Gly	Gly	Pro	Ala	Val	Trp	Pro	Ile	Tyr	Pro	Thr	Gly	
				170					175					180	
Leu	Gly	Arg	Trp	Asp	Leu	Phe	Arg	Glu	Asp	Leu	Val	Arg	Ser	Ala	
				185					190					195	
Ala	Gln	Trp	Pro	Trp	Lys	Lys	Lys	Asn	Ser	Thr	Ala	Tyr	Phe	Arg	
				200					205					210	
Gly	Ser	Arg	Thr	Ser	Pro	Glu	Arg	Asp	Pro	Leu	Ile	Leu	Leu	Ser	
				215					220					225	
Arg	Lys	Asn	Pro	Lys	Leu	Val	Asp	Ala	Glu	Tyr	Thr	Lys	Asn	Gln	
				230					235					240	
Ala	Trp	Lys	Ser	Met	Lys	Asp	Thr	Leu	Gly	Lys	Pro	Ala	Ala	Lys	
				245					250					255	

Asp	Val	His	Leu	Val	Asp	His	Cys	Lys	Tyr	Lys	Tyr	Leu	Phe	Asn	
				260					265					270	
Phe	Arg	Gly	Val	Ala	Ala	Ser	Phe	Arg	Phe	Lys	His	Leu	Phe	Leu	
				275					280					285	
Cys	Gly	Ser	Leu	Val	Phe	His	Val	Gly	Asp	Glu	Trp	Leu	Glu	Phe	
				290					295					300	
Phe	Tyr	Pro	Gln	Leu	Lys	Pro	Trp	Val	His	Tyr	Ile	Pro	Val	Lys	
				305					310					315	
Thr	Asp	Leu	Ser	Asn	Val	Gln	Glu	Leu	Leu	Gln	Phe	Val	Lys	Ala	
				320					325					330	
Asn	Asp	Asp	Val	Ala	Gln	Glu	Ile	Ala	Glu	Arg	Gly	Ser	Gln	Phe	
				335					340					345	
Ile	Arg	Asn	His	Leu	Gln	Met	Asp	Asp	Ile	Thr	Cys	Tyr	Trp	Glu	
				350					355					360	
Asn	Leu	Leu	Ser	Glu	Tyr	Ser	Lys	Phe	Leu	Ser	Tyr	Asn	Val	Thr	
				365					370					375	
Arg	Arg	Lys	Gly	Tyr	Asp	Gln	Ile	Ile	Pro	Lys	Met	Leu	Lys	Thr	
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Glu Leu

<210> 206

<211> 1425

<212> DNA

<213> Homo sapiens

<400> 206

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<210> 207

<211> 262

<212> PRT

<213> Homo sapiens

<400> 207

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Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20				25					30	
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35				40					45	
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50				55					60	
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Leu	Phe	Val	Gly
				65				70					75	
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser

80								85				90			
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr	
				95					100					105	
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro	
				110					115					120	
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr	
				125					130					135	
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu	
				140					145					150	
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met	
				155					160					165	
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro	
				170					175					180	
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu	
				185					190					195	
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val	
				200					205					210	
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr	
				215					220					225	
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg	
				230					235					240	
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg	
				245					250					255	
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 <212> DNA
 <213> Homo sapiens

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Asp Asn Tyr Ser	Tyr Arg Gly Phe Tyr	Gln Lys Thr His Ile	Ser		
	215		220		225
Tyr Gln Glu Tyr	Pro Phe Lys Val Phe	Pro Pro Tyr Cys Ser	Gly		
	230		235		240
Leu Gly Tyr Ile	Met Ser Arg Asp Leu	Val Pro Arg Ile Tyr	Glu		
	245		250		255
Met Met Gly His	Val Lys Pro Ile Lys	Phe Glu Asp Val Tyr	Val		
	260		265		270
Gly Ile Cys Leu	Asn Leu Leu Lys Val	Asn Ile His Ile Pro	Glu		
	275		280		285
Asp Thr Asn Leu	Phe Phe Leu Tyr Arg	Ile His Leu Asp Val	Cys		
	290		295		300
Gln Leu Arg Arg	Val Ile Ala Ala His	Gly Phe Ser Ser Lys	Glu		
	305		310		315
Ile Ile Thr Phe	Trp Gln Val Met Leu	Arg Asn Thr Thr Cys	His		
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Tyr					

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 <211> 745
 <212> DNA
 <213> Homo sapiens

<400> 210
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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
 50 55 60
 Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
 65 70 75
 Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
 80 85 90
 Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
 95 100 105
 Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met
 110 115 120
 Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
 125 130 135
 Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
 140 145 150
 Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
 155 160 165
 Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
 170 175 180
 Asp Thr Val Glu Asn
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<210> 212
 <211> 1706
 <212> DNA
 <213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

<400> 213
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 35 40 45
 Thr Thr Glu Glu Glu Ile Gln Glu Ile Cys Ile Glu Thr Leu Arg
 50 55 60
 Leu Tyr Thr Arg Lys Lys Pro Asn Tyr Glu Leu Leu Glu Lys Glu
 65 70 75
 Val Glu Lys Arg Lys Val Ala Leu Gln Glu Ala Lys Leu Lys Ala
 80 85 90
 Lys Gly Leu Asn Pro Asp Gly Thr Pro Ala Leu Ser Thr Leu Gly
 95 100 105
 Gly Phe Ser Pro Ala Ser Lys Pro Ser Ser Pro Arg Glu Val Lys
 110 115 120
 Ala Glu Glu Lys Ser Pro Ile Ser Ile Asn Val Lys Thr Val Lys
 125 130 135
 Lys Glu Pro Glu Asp Arg Gln Gln Ala Ser Lys Ser Pro Tyr Asn
 140 145 150
 Gly Val Arg Lys Asp Ser Lys Arg Ser Arg Asn Ser Arg Ser Ala
 155 160 165
 Ser Arg Ser Arg Ser Arg Thr Arg Ser Arg Ser Arg Ser His Thr
 170 175 180
 Pro Arg Arg His Tyr Asn Asn Arg Arg Ser Arg Ser Gly Thr Tyr
 185 190 195
 Ser Ser Arg Ser Arg Ser Arg Ser Arg Ser His Ser Glu Ser Pro
 200 205 210

Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys
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<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 563

<223> unknown base

<400> 214

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<210> 216
<211> 479
<212> PRT
<213> Homo sapiens

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35 40 45
Glu Glu Leu Arg Ala Leu Ala Gly Lys Pro Arg Pro Arg Gly Arg
50 55 60
Lys Glu Arg Trp Ala Asn Gly Leu Ser Glu Glu Lys Pro Leu Ser
65 70 75
Val Pro Arg Asp Ala Pro Phe Gln Leu Glu Thr Cys Pro Leu Thr
80 85 90
Thr Val Asp Ala Leu Val Leu Arg Phe Phe Leu Glu Tyr Gln Trp
95 100 105
Phe Val Asp Phe Ala Val Tyr Ser Gly Gly Val Tyr Leu Phe Thr
110 115 120
Glu Ala Tyr Tyr Tyr Met Leu Gly Pro Ala Lys Glu Thr Asn Ile
125 130 135
Ala Val Phe Trp Cys Leu Leu Thr Val Thr Phe Ser Ile Lys Met
140 145 150

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Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu	
				170					175					180	
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly	
				185					190					195	
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu	
				200					205					210	
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu	
				215					220					225	
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala	
				230					235					240	
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp	
				245					250					255	
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu	
				260					265					270	
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr	
				275					280					285	
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu	
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Thr	Arg	Phe	Ser	Leu	Leu	Ser	Asp	Ser	Ala	Phe	Asp	Ser	Gly	Arg	
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				320					325					330	
Arg	Pro	His	Leu	Gln	Ala	Tyr	Leu	Cys	Leu	Ala	Lys	Ala	Arg	Val	
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Glu	Gln	Leu	Arg	Arg	Glu	Ala	Gly	Arg	Ile	Glu	Ala	Arg	Glu	Ile	
				350					355					360	
Gln	Gln	Arg	Val	Val	Arg	Val	Tyr	Cys	Tyr	Val	Thr	Val	Val	Ser	
				365					370					375	
Leu	Gln	Tyr	Leu	Thr	Pro	Leu	Ile	Leu	Thr	Leu	Asn	Cys	Thr	Leu	
				380					385					390	
Leu	Leu	Lys	Thr	Leu	Gly	Gly	Tyr	Ser	Trp	Gly	Leu	Gly	Pro	Ala	
				395					400					405	
Pro	Leu	Leu	Ser	Pro	Asp	Pro	Ser	Ser	Ala	Ser	Ala	Ala	Pro	Ile	
				410					415					420	
Gly	Ser	Gly	Glu	Asp	Glu	Val	Gln	Gln	Thr	Ala	Ala	Arg	Ile	Ala	
				425					430					435	
Gly	Ala	Leu	Gly	Gly	Leu	Leu	Thr	Pro	Leu	Phe	Leu	Arg	Gly	Val	

	440		445		450
Leu	Ala	Tyr	Leu	Ile	Trp
				Trp	Thr
				Ala	Ala
				Cys	Gln
				Leu	Leu
				Ala	
				455	460
				465	
Ser	Leu	Phe	Gly	Leu	Tyr
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				Gln	His
				Leu	Ala
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<210> 217
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 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

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 ggaggagctt cgggccctgg cggggaagcc ggggccaga ggcaggaaag 200
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 ccagccaagg agactaacat tgctgtgttc tggtagcctgc tcacagtgc 450
 cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
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 ctgctggcca tgctggtgca agcg 574

<210> 218
 <211> 2571
 <212> DNA
 <213> Homo sapiens

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<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

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				20					25				30
Leu	Cys	Lys	Gly	Ala	Ser	His	Tyr	Gly	Leu	Thr	Lys	Asp	Arg
				35					40				45
Arg	Arg	Ser	Gln	Asp	Gly	Cys	Pro	Asp	Gly	Cys	Ala	Ser	Leu
				50					55				60
Ala	Thr	Ala	Pro	Ser	Pro	Glu	Val	Ser	Ala	Ala	Ala	Thr	Ile
				65					70				75
Leu	Met	Thr	Asp	Glu	Pro	Gly	Leu	Asp	Asn	Pro	Ala	Tyr	Val
													Ser

80					85					90				
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				95					100					105
Arg	Ser	Asn	Arg	Thr	Arg	Ala	Arg	Pro	Phe	Glu	Arg	Ser	Thr	Ile
				110					115					120
Arg	Ser	Arg	Ser	Phe	Lys	Lys	Ile	Asn	Arg	Ala	Leu	Ser	Val	Leu
				125					130					135
Arg	Arg	Thr	Lys	Ser	Gly	Ser	Ala	Val	Ala	Asn	His	Ala	Asp	Gln
				140					145					150
Gly	Arg	Glu	Asn	Ser	Glu	Asn	Thr	Thr	Ala	Pro	Glu	Val	Phe	Pro
				155					160					165
Arg	Leu	Tyr	His	Leu	Ile	Pro	Asp	Gly	Glu	Ile	Thr	Ser	Ile	Lys
				170					175					180
Ile	Asn	Arg	Val	Asp	Pro	Ser	Glu	Ser	Leu	Ser	Ile	Arg	Leu	Val
				185					190					195
Gly	Gly	Ser	Glu	Thr	Pro	Leu	Val	His	Ile	Ile	Ile	Gln	His	Ile
				200					205					210
Tyr	Arg	Asp	Gly	Val	Ile	Ala	Arg	Asp	Gly	Arg	Leu	Leu	Pro	Gly
				215					220					225
Asp	Ile	Ile	Leu	Lys	Val	Asn	Gly	Met	Asp	Ile	Ser	Asn	Val	Pro
				230					235					240
His	Asn	Tyr	Ala	Val	Arg	Leu	Leu	Arg	Gln	Pro	Cys	Gln	Val	Leu
				245					250					255
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				260					265					270
Gly	Gln	Ala	Pro	Asp	Ala	Tyr	Arg	Pro	Arg	Asp	Asp	Ser	Phe	His
				275					280					285
Val	Ile	Leu	Asn	Lys	Ser	Ser	Pro	Glu	Glu	Gln	Leu	Gly	Ile	Lys
				290					295					300
Leu	Val	Arg	Lys	Val	Asp	Glu	Pro	Gly	Val	Phe	Ile	Phe	Asn	Val
				305					310					315
Leu	Asp	Gly	Gly	Val	Ala	Tyr	Arg	His	Gly	Gln	Leu	Glu	Glu	Asn
				320					325					330
Asp	Arg	Val	Leu	Ala	Ile	Asn	Gly	His	Asp	Leu	Arg	Tyr	Gly	Ser
				335					340					345
Pro	Glu	Ser	Ala	Ala	His	Leu	Ile	Gln	Ala	Ser	Glu	Arg	Arg	Val
				350					355					360
His	Leu	Val	Val	Ser	Arg	Gln	Val	Arg	Gln	Arg	Ser	Pro	Asp	Ile
				365					370					375

Phe	Gln	Glu	Ala	Gly	Trp	Asn	Ser	Asn	Gly	Ser	Trp	Ser	Pro	Gly		380	385	390
Pro	Gly	Glu	Arg	Ser	Asn	Thr	Pro	Lys	Pro	Leu	His	Pro	Thr	Ile		395	400	405
Thr	Cys	His	Glu	Lys	Val	Val	Asn	Ile	Gln	Lys	Asp	Pro	Gly	Glu		410	415	420
Ser	Leu	Gly	Met	Thr	Val	Ala	Gly	Gly	Ala	Ser	His	Arg	Glu	Trp		425	430	435
Asp	Leu	Pro	Ile	Tyr	Val	Ile	Ser	Val	Glu	Pro	Gly	Gly	Val	Ile		440	445	450
Ser	Arg	Asp	Gly	Arg	Ile	Lys	Thr	Gly	Asp	Ile	Leu	Leu	Asn	Val		455	460	465
Asp	Gly	Val	Glu	Leu	Thr	Glu	Val	Ser	Arg	Ser	Glu	Ala	Val	Ala		470	475	480
Leu	Leu	Lys	Arg	Thr	Ser	Ser	Ser	Ile	Val	Leu	Lys	Ala	Leu	Glu		485	490	495
Val	Lys	Glu	Tyr	Glu	Pro	Gln	Glu	Asp	Cys	Ser	Ser	Pro	Ala	Ala		500	505	510
Leu	Asp	Ser	Asn	His	Asn	Met	Ala	Pro	Pro	Ser	Asp	Trp	Ser	Pro		515	520	525
Ser	Trp	Val	Met	Trp	Leu	Glu	Leu	Pro	Arg	Cys	Leu	Tyr	Asn	Cys		530	535	540
Lys	Asp	Ile	Val	Leu	Arg	Arg	Asn	Thr	Ala	Gly	Ser	Leu	Gly	Phe		545	550	555
Cys	Ile	Val	Gly	Gly	Tyr	Glu	Glu	Tyr	Asn	Gly	Asn	Lys	Pro	Phe		560	565	570
Phe	Ile	Lys	Ser	Ile	Val	Glu	Gly	Thr	Pro	Ala	Tyr	Asn	Asp	Gly		575	580	585
Arg	Ile	Arg	Cys	Gly	Asp	Ile	Leu	Leu	Ala	Val	Asn	Gly	Arg	Ser		590	595	600
Thr	Ser	Gly	Met	Ile	His	Ala	Cys	Leu	Ala	Arg	Leu	Leu	Lys	Glu		605	610	615
Leu	Lys	Gly	Arg	Ile	Thr	Leu	Thr	Ile	Val	Ser	Trp	Pro	Gly	Thr		620	625	630

Phe Leu

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220

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gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
tccaggggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350
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<210> 221

<211> 184

<212> PRT

<213> Homo sapiens

<400> 221

Met	Lys	Ile	Leu	Val	Ala	Phe	Leu	Val	Val	Leu	Thr	Ile	Phe	Gly
1				5					10					15
Ile	Gln	Ser	His	Gly	Tyr	Glu	Val	Phe	Asn	Ile	Ile	Ser	Pro	Ser
				20					25					30
Asn	Asn	Gly	Gly	Asn	Val	Gln	Glu	Thr	Val	Thr	Ile	Asp	Asn	Glu
				35					40					45
Lys	Asn	Thr	Ala	Ile	Val	Asn	Ile	His	Ala	Gly	Ser	Cys	Ser	Ser
				50					55					60
Thr	Thr	Ile	Phe	Asp	Tyr	Lys	His	Gly	Tyr	Ile	Ala	Ser	Arg	Val
				65					70					75
Leu	Ser	Arg	Arg	Ala	Cys	Phe	Ile	Leu	Lys	Met	Asp	His	Gln	Asn
				80					85					90
Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln

	95		100		105
Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr					
	110		115		120
Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu					
	125		130		135
Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys					
	140		145		150
Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys					
	155		160		165
Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala					
	170		175		180
Asp Ile His Val					

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
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 tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150
 ccattgccta caaagtcttg gaagttttcc ccaaaggccg ctgggtgctc 200
 ataacctgct gtgcacccca gccaccaccg cccatcacct attccctctg 250
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 acctacttct gccgggctgc ctccacctca ggtgcccattg tggacagtgc 400
 caggctacag atgcactggg agctgtgggc caagccagtg tctgagctgc 450
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<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

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Ser	Phe	Ser	Lys	Ala	Arg	Glu	Glu	Glu	Ile	Thr	Pro	Val	Val	Ser	20	25	30	
Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val	35	40	45	
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Pro	Ile	Thr	Tyr	50	55	60	
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val	65	70	75	
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys	80	85	90	
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr	95	100	105	
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu	110	115	120	
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu	125	130	135	
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala	140	145	150	
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp	155	160	165	
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala	170	175	180	
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys	185	190	195	
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val	200	205	210	
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro	215	220	225	

Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg
				230					235					240
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly
			245						250					255
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met					
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<210> 224

<211> 1297

<212> DNA

<213> Homo sapiens

<400> 224

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ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcactat 200
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Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215 220 225

Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
 230 235 240

Phe Ile Leu Pro Gly Ile
 245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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 caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150
 ggttttaatt ttggtggtag cctcaccca attctggtgt ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctggt gatcaaaaga 250
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 aaaccttgca gcaagggacc ttagataggg ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227

<211> 115

<212> PRT

<213> Homo sapiens

<400> 227

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 1 5 10 15
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys

	50		55		60
Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr					
	65		70		75
Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu					
	80		85		90
Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln					
	95		100		105
Pro Thr Glu Gln His Phe Trp Ala Arg Leu					
	110		115		

<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

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<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn
1					5				10					15

Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile	20	25	30
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn	35	40	45
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val	50	55	60
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser	65	70	75
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile	80	85	90
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln	95	100	105
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn	110	115	120
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu	125	130	135
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg	140	145	150
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr	155	160	165
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu	170	175	180
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu	185	190	195
Phe	Asn	Leu	Lys	Tyr	Leu	Asn	Leu	Gly	Met	Cys	Asn	Ile	Lys	Asp	200	205	210
Met	Pro	Asn	Leu	Thr	Pro	Leu	Val	Gly	Leu	Glu	Glu	Leu	Glu	Met	215	220	225
Ser	Gly	Asn	His	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly	230	235	240
Leu	Ser	Ser	Leu	Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser	245	250	255
Leu	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu	260	265	270
Leu	Asn	Leu	Ala	His	Asn	Asn	Leu	Ser	Ser	Leu	Pro	His	Asp	Leu	275	280	285
Phe	Thr	Pro	Leu	Arg	Tyr	Leu	Val	Glu	Leu	His	Leu	His	His	Asn	290	295	300
Pro	Trp	Asn	Cys	Asp	Cys	Asp	Ile	Leu	Trp	Leu	Ala	Trp	Trp	Leu			

	305		310		315
Arg Glu Tyr Ile	Pro Thr Asn Ser Thr	Cys Cys Gly Arg Cys	His		
	320	325	330		
Ala Pro Met His	Met Arg Gly Arg Tyr	Leu Val Glu Val Asp	Gln		
	335	340	345		
Ala Ser Phe Gln	Cys Ser Ala Pro Phe	Ile Met Asp Ala Pro	Arg		
	350	355	360		
Asp Leu Asn Ile	Ser Glu Gly Arg Met	Ala Glu Leu Lys Cys	Arg		
	365	370	375		
Thr Pro Pro Met	Ser Ser Val Lys Trp	Leu Leu Pro Asn Gly	Thr		
	380	385	390		
Val Leu Ser His	Ala Ser Arg His Pro	Arg Ile Ser Val Leu	Asn		
	395	400	405		
Asp Gly Thr Leu	Asn Phe Ser His Val	Leu Leu Ser Asp Thr	Gly		
	410	415	420		
Val Tyr Thr Cys	Met Val Thr Asn Val	Ala Gly Asn Ser Asn	Ala		
	425	430	435		
Ser Ala Tyr Leu	Asn Val Ser Thr Ala	Glu Leu Asn Thr Ser	Asn		
	440	445	450		
Tyr Ser Phe Phe	Thr Thr Val Thr Val	Glu Thr Thr Glu Ile	Ser		
	455	460	465		
Pro Glu Asp Thr	Thr Arg Lys Tyr Lys	Pro Val Pro Thr Thr	Ser		
	470	475	480		
Thr Gly Tyr Gln	Pro Ala Tyr Thr Thr	Ser Thr Thr Val Leu	Ile		
	485	490	495		
Gln Thr Thr Arg	Val Pro Lys Gln Val	Ala Val Pro Ala Thr	Asp		
	500	505	510		
Thr Thr Asp Lys	Met Gln Thr Ser Leu	Asp Glu Val Met Lys	Thr		
	515	520	525		
Thr Lys Ile Ile	Ile Gly Cys Phe Val	Ala Val Thr Leu Leu	Ala		
	530	535	540		
Ala Ala Met Leu	Ile Val Phe Tyr Lys	Leu Arg Lys Arg His	Gln		
	545	550	555		
Gln Arg Ser Thr	Val Thr Ala Ala Arg	Thr Val Glu Ile Ile	Gln		
	560	565	570		
Val Asp Glu Asp	Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr	Ala		
	575	580	585		
Ala Pro Ser Gly	Val Ser Gly Glu Gly	Ala Val Val Leu Pro	Thr		
	590	595	600		

Ile	His	Asp	His	Ile	Asn	Tyr	Asn	Thr	Tyr	Lys	Pro	Ala	His	Gly
				605					610					615
Ala	His	Trp	Thr	Glu	Asn	Ser	Leu	Gly	Asn	Ser	Leu	His	Pro	Thr
				620					625					630
Val	Thr	Thr	Ile	Ser	Glu	Pro	Tyr	Ile	Ile	Gln	Thr	His	Thr	Lys
				635					640					645
Asp	Lys	Val	Gln	Glu	Thr	Gln	Ile							
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<210> 230

<211> 2846

<212> DNA

<213> Homo sapiens

<400> 230

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 ctgacatcgc catcctgaag ctccatgaca aggcccgat cagcaccga 1750
 gtccagccca tctgcctcgc tgccagtcgg gatctcagca cttccttcca 1800
 ggagtccac atcactgtgg ctggctggaa tgtcctggca gacgtgagga 1850
 gccctggctt caagaacgac acactgcgct ctgggggtgg cagtgtggtg 1900
 gactcgctgc tgtgtgagga gcagcatgag gaccatggca tcccagtga 1950
 tgtcactgat aacatgttct gtgccagctg ggaaccact gcccttctg 2000
 atatctgcac tgacagagca ggaggcatcg cggctgtgtc cttcccggga 2050
 cgagcatctc ctgagccacg ctggcatctg atgggactgg tcagctggag 2100
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaaggtgc 2150
 tgccctttaa agactggatt gaaagaaata tgaaatgaac catgctcatg 2200
 cactccttga gaagtgttct tgtatatccg tctgtacgtg tgctattgcg 2250
 tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300
 cagggttct gacttcaggg acaaaactca gtgaagggtg agtagacctc 2350
 cattgctggg aggtgatgc cgcgtccact actaggacag ccaattggaa 2400
 gatgccaggg cttgcaagaa gtaagtttct tcaaagaaga ccatatacaa 2450

aacctctcca ctccactgac ctggtggtct tccccaactt tcagttatac 2500
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 gtccttttcc ttcccatct cttgtacaca ttttaataaa ataagggttg 2700
 gcttctgaac tacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
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<210> 231

<211> 720

<212> PRT

<213> Homo sapiens

<400> 231

Met	Glu	Leu	Gly	Cys	Trp	Thr	Gln	Leu	Gly	Leu	Thr	Phe	Leu	Gln	1	5	10	15
Leu	Leu	Leu	Ile	Ser	Ser	Leu	Pro	Arg	Glu	Tyr	Thr	Val	Ile	Asn	20	25	30	
Glu	Ala	Cys	Pro	Gly	Ala	Glu	Trp	Asn	Ile	Met	Cys	Arg	Glu	Cys	35	40	45	
Cys	Glu	Tyr	Asp	Gln	Ile	Glu	Cys	Val	Cys	Pro	Gly	Lys	Arg	Glu	50	55	60	
Val	Val	Gly	Tyr	Thr	Ile	Pro	Cys	Cys	Arg	Asn	Glu	Glu	Asn	Glu	65	70	75	
Cys	Asp	Ser	Cys	Leu	Ile	His	Pro	Gly	Cys	Thr	Ile	Phe	Glu	Asn	80	85	90	
Cys	Lys	Ser	Cys	Arg	Asn	Gly	Ser	Trp	Gly	Gly	Thr	Leu	Asp	Asp	95	100	105	
Phe	Tyr	Val	Lys	Gly	Phe	Tyr	Cys	Ala	Glu	Cys	Arg	Ala	Gly	Trp	110	115	120	
Tyr	Gly	Gly	Asp	Cys	Met	Arg	Cys	Gly	Gln	Val	Leu	Arg	Ala	Pro	125	130	135	
Lys	Gly	Gln	Ile	Leu	Leu	Glu	Ser	Tyr	Pro	Leu	Asn	Ala	His	Cys	140	145	150	
Glu	Trp	Thr	Ile	His	Ala	Lys	Pro	Gly	Phe	Val	Ile	Gln	Leu	Arg	155	160	165	
Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp	170	175	180	

Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile	
				185					190					195	
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile	
				200					205					210	
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn	
				215					220					225	
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser	
				230					235					240	
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala	
				245					250					255	
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg	
				260					265					270	
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly	
				275					280					285	
Pro	Val	Asn	Gly	Tyr	Gln	Lys	Ile	Thr	Gly	Gly	Pro	Gly	Leu	Ile	
				290					295					300	
Asn	Gly	Arg	His	Ala	Lys	Ile	Gly	Thr	Val	Val	Ser	Phe	Phe	Cys	
				305					310					315	
Asn	Asn	Ser	Tyr	Val	Leu	Ser	Gly	Asn	Glu	Lys	Arg	Thr	Cys	Gln	
				320					325					330	
Gln	Asn	Gly	Glu	Trp	Ser	Gly	Lys	Gln	Pro	Ile	Cys	Ile	Lys	Ala	
				335					340					345	
Cys	Arg	Glu	Pro	Lys	Ile	Ser	Asp	Leu	Val	Arg	Arg	Arg	Val	Leu	
				350					355					360	
Pro	Met	Gln	Val	Gln	Ser	Arg	Glu	Thr	Pro	Leu	His	Gln	Leu	Tyr	
				365					370					375	
Ser	Ala	Ala	Phe	Ser	Lys	Gln	Lys	Leu	Gln	Ser	Ala	Pro	Thr	Lys	
				380					385					390	
Lys	Pro	Ala	Leu	Pro	Phe	Gly	Asp	Leu	Pro	Met	Gly	Tyr	Gln	His	
				395					400					405	
Leu	His	Thr	Gln	Leu	Gln	Tyr	Glu	Cys	Ile	Ser	Pro	Phe	Tyr	Arg	
				410					415					420	
Arg	Leu	Gly	Ser	Ser	Arg	Arg	Thr	Cys	Leu	Arg	Thr	Gly	Lys	Trp	
				425					430					435	
Ser	Gly	Arg	Ala	Pro	Ser	Cys	Ile	Pro	Ile	Cys	Gly	Lys	Ile	Glu	
				440					445					450	
Asn	Ile	Thr	Ala	Pro	Lys	Thr	Gln	Gly	Leu	Arg	Trp	Pro	Trp	Gln	
				455					460					465	
Ala	Ala	Ile	Tyr	Arg	Arg	Thr	Ser	Gly	Val	His	Asp	Gly	Ser	Leu	

	470		475		480
His Lys Gly Ala	Trp Phe Leu Val Cys	Ser Gly Ala Leu Val	Asn		
	485		490		495
Glu Arg Thr Val	Val Val Ala Ala His	Cys Val Thr Asp Leu	Gly		
	500		505		510
Lys Val Thr Met	Ile Lys Thr Ala Asp	Leu Lys Val Val Leu	Gly		
	515		520		525
Lys Phe Tyr Arg	Asp Asp Asp Arg Asp	Glu Lys Thr Ile Gln	Ser		
	530		535		540
Leu Gln Ile Ser	Ala Ile Ile Leu His	Pro Asn Tyr Asp Pro	Ile		
	545		550		555
Leu Leu Asp Ala	Asp Ile Ala Ile Leu	Lys Leu Leu Asp Lys	Ala		
	560		565		570
Arg Ile Ser Thr	Arg Val Gln Pro Ile	Cys Leu Ala Ala Ser	Arg		
	575		580		585
Asp Leu Ser Thr	Ser Phe Gln Glu Ser	His Ile Thr Val Ala	Gly		
	590		595		600
Trp Asn Val Leu	Ala Asp Val Arg Ser	Pro Gly Phe Lys Asn	Asp		
	605		610		615
Thr Leu Arg Ser	Gly Val Val Ser Val	Val Asp Ser Leu Leu	Cys		
	620		625		630
Glu Glu Gln His	Glu Asp His Gly Ile	Pro Val Ser Val Thr	Asp		
	635		640		645
Asn Met Phe Cys	Ala Ser Trp Glu Pro	Thr Ala Pro Ser Asp	Ile		
	650		655		660
Cys Thr Ala Glu	Thr Gly Gly Ile Ala	Ala Val Ser Phe Pro	Gly		
	665		670		675
Arg Ala Ser Pro	Glu Pro Arg Trp His	Leu Met Gly Leu Val	Ser		
	680		685		690
Trp Ser Tyr Asp	Lys Thr Cys Ser His	Arg Leu Ser Thr Ala	Phe		
	695		700		705
Thr Lys Val Leu	Pro Phe Lys Asp Trp	Ile Glu Arg Asn Met	Lys		
	710		715		720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232
 aggttcgtga tggagacaac cgcg 24

<210> 233
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 233
 tgtcaaggac gcactgccgt catg 24

<210> 234
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 234
 tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235
 <211> 1964
 <212> DNA
 <213> Homo sapiens

<400> 235
 accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
 agctcaactt gaagctttct tgccctgcagt gaagcagaga gatagatatt 100
 attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
 caaattccga ttactgttgc tgttgacttt gtgacctgaca gtgggtgggt 200
 gggccaccag taactacttc gtgggtgccca ttcaagagat tcctaaagca 250
 aaggagttca tggctaattt ccataagacc ctcatTTTgg ggaagggaaa 300
 aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
 cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
 gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
 ccggtatcgc cctcaggaat gtaaagcttt acagaggggc gccatcctcg 500
 ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
 catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
 ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
 atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700

gtggacctgg tacccgagaa tgactttaac ctttacaagt gtgaggagca 750
 tcccaagcat ctggtggttg gcaggaacag cactgggtac aggttacgtt 800
 acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850
 aaggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900
 tgacctcaga ctcaggggtg agctccaaag aatgaaaatt tcccggcccc 950
 tgcttgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000
 aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgttg 1100
 aacacaatcc tttatatatc aacatcacag tggatttctg gtttggtgca 1150
 tgacctgga tcttttgggtg atgtttggaa gaactgattc tttgtttgca 1200
 ataattttgg cctagagact tcaaatagta gcacacatta agaacctgtt 1250
 acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300
 ctctgtgtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350
 tcattttgat catgaggggt aaatattgta atatggatac ttgaaggact 1400
 ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450
 tggttgaagg agattttattt aaatttgaag taatatatta tgggataaaa 1500
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 gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650
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 cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950
 gtgaaaaagc aaaa 1964

<210> 236
 <211> 344
 <212> PRT
 <213> Homo sapiens
 <220>

<221> Signal peptide
 <222> 1-27
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 4-7, 220-223, 335-338
 <223> N-glycosylation sites

<220>
 <221> Xylose isomerase proteins
 <222> 191-201
 <223> Xylose isomerase proteins

<400> 236

Met	Gly	Phe	Asn	Leu	Thr	Phe	His	Leu	Ser	Tyr	Lys	Phe	Arg	Leu	
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Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	

215	220	225
Leu Arg Tyr Ser Gly Tyr Phe Gly Gly Val Thr Ala Leu Ser Arg		
230	235	240
Glu Gln Phe Phe Lys Val Asn Gly Phe Ser Asn Asn Tyr Trp Gly		
245	250	255
Trp Gly Gly Glu Asp Asp Asp Leu Arg Leu Arg Val Glu Leu Gln		
260	265	270
Arg Met Lys Ile Ser Arg Pro Leu Pro Glu Val Gly Lys Tyr Thr		
275	280	285
Met Val Phe His Thr Arg Asp Lys Gly Asn Glu Val Asn Ala Glu		
290	295	300
Arg Met Lys Leu Leu His Gln Val Ser Arg Val Trp Arg Thr Asp		
305	310	315
Gly Leu Ser Ser Cys Ser Tyr Lys Leu Val Ser Val Glu His Asn		
320	325	330
Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala		
335	340	

<210> 237

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

ccttacctca gaggccagag caagc 25

<210> 238

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 238

gagcttcacgc cgttctgcgt tcacc 25

<210> 239

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 239

caggaatgta aagctttaca gagggtcgcc atcctcgttc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
cgtgggccgg ggtcgcgcag cgggctgtgg gcgcgccgg aggagcgacc 50
gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gccccacgct 100
tctcccgttc cgggccccgc aatggcccag gcagtgtggt cgcgcctcgg 150
ccgcatcctc tggcttgctt gcctcctgcc ctgggccccg gcaggggtgg 200
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggccctg cccgctgacg cccacctcta ccgcttccac tggatccaca 350
ccccgctggt gcttactggc aagatggaga agggtctcag ctccaccatc 400
cgtgtgggtc gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500
tccccatcac agagtctctc gtggggggacc ttgttgtcac ccagaacact 550
tcctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
cttctctctc caccgaccga gcaacttctt caagaccgcc ttgtttctct 650
acagctggga cttcggggac gggaccacga tgggtgactga agactccgtg 700
gtctattata actattccat catcggggacc ttcaaccgtga agctcaaagt 750
ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
agaagaccgg ggacttctcc gcctcgtga agctgcagga aaccttcga 850
ggcatccaag tgttggggcc caccctaatt cagaccttc aaaagatgac 900
cgtgaccttg aacttcttgg ggagccctcc tctgactgtg tgetggcgtc 950
tcaagcctga gtgcctcccg ctggaggaag gggagtgcc ccctgtgtcc 1000
gtggccagca cagcgtacaa cctgaccac accctcaggg accctgggga 1050
ctactgcttc agcatccggg ccgagaatat catcagcaag acacatcagt 1100
accacaagat ccaggtgtgg ccctccagaa tccagccggc tgtctttgct 1150
ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
gacctgcgg aatgccactc agcaaaagga catggtggag aaccgggagc 1250
caccctctgg ggtcagggtc tgetgccaga tgtgctgtgg gcctttcttg 1300

ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350
 gctcccgccc ctctataagt ctgtcaaac ttacaccgtg tgagcactcc 1400
 ccctccccac cccatctcag tgttaactga ctgctgactt ggagtttcca 1450
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
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 cagccactga cataagcccc actcgggttac cacccttg accccctacc 1650
 tttgaagagg cttcgtgcag gactttgatg cttgggggtg tccgtgttga 1700
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 gtgccagaga gctagaaaga aggtcataaa ggggttaaaaa tccataacta 1850
 aagggtgtac acatagatgg gcacactcac agagagaagt gtgcatgtac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcgggt 2000
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 cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
 atatcacctt attttatcga aacctatctg tgaaactttc actgaggaaa 2250
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 aaaaaaatac aaaaagttag ccgggcgtgg tgggtgggtg ctgtagtccc 2450
 agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gcttgcatg agccagatg gcgccactgc actccagcct gagtgcacaga 2550
 gcgagactct gtctcca 2567

<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens
 <400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu	
1				5					10					15	
Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	
				20					25					30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	
				35					40					45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	
				50					55					60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	
				65					70					75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	
				80					85					90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	
				95					100					105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	
				110					115					120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	
				125					130					135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	
				140					145					150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	
				155					160					165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	
				170					175					180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	
				185					190					195	
Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val	
				200					205					210	
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val	
				215					220					225	
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu	
				230					235					240	
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr	
				245					250					255	
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro	
				260					265					270	
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu	
				275					280					285	
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn	

	290	295	300
Leu Thr His Thr	Phe Arg Asp Pro Gly	Asp Tyr Cys Phe Ser	Ile
	305	310	315
Arg Ala Glu Asn	Ile Ile Ser Lys Thr	His Gln Tyr His Lys	Ile
	320	325	330
Gln Val Trp Pro	Ser Arg Ile Gln Pro	Ala Val Phe Ala Phe	Pro
	335	340	345
Cys Ala Thr Leu	Ile Thr Val Met Leu	Ala Phe Ile Met Tyr	Met
	350	355	360
Thr Leu Arg Asn	Ala Thr Gln Gln Lys	Asp Met Val Glu Asn	Pro
	365	370	375
Glu Pro Pro Ser	Gly Val Arg Cys Cys	Cys Gln Met Cys Cys	Gly
	380	385	390
Pro Phe Leu Leu	Glu Thr Pro Ser Glu	Tyr Leu Glu Ile Val	Arg
	395	400	405
Glu Asn His Gly	Leu Leu Pro Pro Leu	Tyr Lys Ser Val Lys	Thr
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Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

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<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 243

gaaaggccca cagcacatct ggcag 25

<210> 244

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 244
ccacgacccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245

<211> 485

<212> DNA

<213> Homo sapiens

<400> 245

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gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccttg cccccgtccc ctcccttctt tatttattcc tgctgcccc 350
gaacataggt cttggaataa aatggctggt tcttttgttt tccaaaaaaa 400
aaaaaaaaaa aaaaaa taaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246

<211> 84

<212> PRT

<213> Homo sapiens

<400> 246

Met	Ala	Leu	Ser	Ser	Gln	Ile	Trp	Ala	Ala	Cys	Leu	Leu	Leu	Leu
1				5					10					15
Leu	Leu	Leu	Ala	Ser	Leu	Thr	Ser	Gly	Ser	Val	Phe	Pro	Gln	Gln
			20						25					30
Thr	Gly	Gln	Leu	Ala	Glu	Leu	Gln	Pro	Gln	Asp	Arg	Ala	Gly	Ala
			35						40					45
Arg	Ala	Ser	Trp	Met	Pro	Met	Phe	Gln	Arg	Arg	Arg	Arg	Arg	Asp
			50						55					60
Thr	His	Phe	Pro	Ile	Cys	Ile	Phe	Cys	Cys	Gly	Cys	Cys	His	Arg
			65						70					75
Ser	Lys	Cys	Gly	Met	Cys	Cys	Lys	Thr						
			80											

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

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agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150
ccttctcggtt ttcacatag tgccagccat ttttggagtc tcctttggta 200
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
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<210> 248

<211> 456

<212> PRT

<213> Homo sapiens

<400> 248

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Gly	Ile	Ser	Leu	Thr	Val	Leu	Phe	Thr	Leu	Leu	Leu	Val	Phe	Ile
				20					25					30

Ile	Val	Pro	Ala	Ile	Phe	Gly	Val	Ser	Phe	Gly	Ile	Arg	Lys	Leu
				35					40					45

Tyr	Met	Lys	Ser	Leu	Leu	Lys	Ile	Phe	Ala	Trp	Ala	Thr	Leu	Arg
				50					55					60

Met	Glu	Arg	Gly	Ala	Lys	Glu	Lys	Asn	His	Gln	Leu	Tyr	Lys	Pro
				65					70					75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	
				80					85					90	
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	
				95					100					105	
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	
				110					115					120	
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	
				125					130					135	
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	
				140					145					150	
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	
				155					160					165	
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	
				170					175					180	
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	
				185					190					195	
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	
				200					205					210	
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	
				215					220					225	
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	
				230					235					240	
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	
				245					250					255	
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	
				260					265					270	
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	
				275					280					285	
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	
				290					295					300	
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	
				305					310					315	
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	
				320					325					330	
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	
				335					340					345	
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	
				350					355					360	
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	

	365	370	375
Met Thr Ser Trp	Ala Ile Val Cys Ser	Val Trp Tyr Leu Pro	Pro
	380	385	390
Met Thr Arg Glu	Ala Asp Glu Asp Ala	Val Gln Phe Ala Asn	Arg
	395	400	405
Val Lys Ser Ala	Ile Ala Arg Gln Gly	Gly Leu Val Asp Leu	Leu
	410	415	420
Trp Asp Gly Gly	Leu Lys Arg Glu Lys	Val Lys Asp Thr Phe	Lys
	425	430	435
Glu Glu Gln Gln	Lys Leu Tyr Ser Lys	Met Ile Val Gly Asn	His
	440	445	450
Lys Asp Arg Ser	Arg Ser		
	455		

<210> 249

<211> 1103

<212> DNA

<213> Homo sapiens

<400> 249

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<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met	Ala	Leu	Ala	Ala	Leu	Met	Ile	Ala	Leu	Gly	Ser	Leu	Gly	Leu	1	5	10	15
His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly	20	25	30	
Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu	35	40	45	
Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala	50	55	60	
His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr	65	70	75	
Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys	80	85	90	
Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn	95	100	105	
Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly	110	115	120	
Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His	125	130	135	
Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly	140	145	150	
Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser	155	160	165	
Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly	170	175	180	
Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe	185	190	195	

Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu
				200					205					210
Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr
				215					220					225
Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro
				230					235					240

<210> 251
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<210> 252
 <211> 1076
 <212> DNA
 <213> Homo sapiens

<400> 252
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<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

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Gln	Leu	Thr	Gly	Ser	Ala	Ala	Ser	Gly	Pro	Val	Lys	Glu	Leu	Val	20	25	30	
Gly	Ser	Val	Gly	Gly	Ala	Val	Thr	Phe	Pro	Leu	Lys	Ser	Lys	Val	35	40	45	
Lys	Gln	Val	Asp	Ser	Ile	Val	Trp	Thr	Phe	Asn	Thr	Thr	Pro	Leu	50	55	60	
Val	Thr	Ile	Gln	Pro	Glu	Gly	Gly	Thr	Ile	Ile	Val	Thr	Gln	Asn	65	70	75	
Arg	Asn	Arg	Glu	Arg	Val	Asp	Phe	Pro	Asp	Gly	Gly	Tyr	Ser	Leu	80	85	90	
Lys	Leu	Ser	Lys	Leu	Lys	Lys	Asn	Asp	Ser	Gly	Ile	Tyr	Tyr	Val	95	100	105	
Gly	Ile	Tyr	Ser	Ser	Ser	Leu	Gln	Gln	Pro	Ser	Thr	Gln	Glu	Tyr	110	115	120	
Val	Leu	His	Val	Tyr	Glu	His	Leu	Ser	Lys	Pro	Lys	Val	Thr	Met	125	130	135	
Gly	Leu	Gln	Ser	Asn	Lys	Asn	Gly	Thr	Cys	Val	Thr	Asn	Leu	Thr	140	145	150	
Cys	Cys	Met	Glu	His	Gly	Glu	Glu	Asp	Val	Ile	Tyr	Thr	Trp	Lys	155	160	165	
Ala	Leu	Gly	Gln	Ala	Ala	Asn	Glu	Ser	His	Asn	Gly	Ser	Ile	Leu	170	175	180	
Pro	Ile	Ser	Trp	Arg	Trp	Gly	Glu	Ser	Asp	Met	Thr	Phe	Ile	Cys	185	190	195	
Val	Ala	Arg	Asn	Pro	Val	Ser	Arg	Asn	Phe	Ser	Ser	Pro	Ile	Leu				

	200		205		210
Ala Arg Lys Leu	Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser			
	215	220		225	
Met Val Leu Leu	Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu			
	230	235		240	
Phe Val Leu Gly	Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln			
	245	250		255	
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu			
	260	265		270	
Thr Pro Asn Ile	Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp			
	275	280		285	
Thr Ile Pro His	Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala			
	290	295		300	
Asn Thr Val Tyr	Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn			
	305	310		315	
Pro His Ser Leu	Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala			
	320	325		330	
Tyr Glu Asn Val	Ile				
	335				

<210> 254
 <211> 1053
 <212> DNA
 <213> Homo sapiens

<400> 254
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 aaa 1053

<210> 255
 <211> 860
 <212> DNA
 <213> Homo sapiens

<400> 255
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 gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
 ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
 gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
 tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800

gacaatTTTT catgaaatta ttcctcttcc tgttcaataa atgattaccc 850
 ttgcacttaa 860

<210> 256
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 256
 Met Lys Met Leu Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
 1 5 10 15
 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
 20 25 30
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
 35 40 45
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
 50 55 60
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
 65 70 75
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
 80 85 90
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
 95 100 105
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
 110 115 120
 Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met
 125 130 135
 Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu
 140 145 150
 Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn
 155 160 165
 Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu
 170 175 180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
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 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150

tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200
agcaggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
agtgtgatca cagtcattgg tgctctgtat tgcattgtga tatccatcca 350
ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400
ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactgggtt 500
caataaaccc accagtaacg acaccatggc gagtggctgg agagcatcta 550
gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
gtatttttag gtctattgct tgttggaatt ctggaggtcc tgtttgggct 650
cagtcagata gtcacgggtt tccttggtg tctgtgtgga gtctctaagc 700
gaagaagtca aattgtgtag tttaatggga ataaatgta agtatcagta 750
gtttgaaaaa aaaaaa 766

<210> 258

<211> 229

<212> PRT

<213> Homo sapiens

<400> 258

Met	Thr	Cys	Cys	Glu	Gly	Trp	Thr	Ser	Cys	Asn	Gly	Phe	Ser	Leu	1	5	10	15
Leu	Val	Leu	Leu	Leu	Leu	Gly	Val	Val	Leu	Asn	Ala	Ile	Pro	Leu	20	25	30	
Ile	Val	Ser	Leu	Val	Glu	Glu	Asp	Gln	Phe	Ser	Gln	Asn	Pro	Ile	35	40	45	
Ser	Cys	Phe	Glu	Trp	Trp	Phe	Pro	Gly	Ile	Ile	Gly	Ala	Gly	Leu	50	55	60	
Met	Ala	Ile	Pro	Ala	Thr	Thr	Met	Ser	Leu	Thr	Ala	Arg	Lys	Arg	65	70	75	
Ala	Cys	Cys	Asn	Asn	Arg	Thr	Gly	Met	Phe	Leu	Ser	Ser	Phe	Phe	80	85	90	
Ser	Val	Ile	Thr	Val	Ile	Gly	Ala	Leu	Tyr	Cys	Met	Leu	Ile	Ser	95	100	105	
Ile	Gln	Ala	Leu	Leu	Lys	Gly	Pro	Leu	Met	Cys	Asn	Ser	Pro	Ser	110	115	120	
Asn	Ser	Asn	Ala	Asn	Cys	Glu	Phe	Ser	Leu	Lys	Asn	Ile	Ser	Asp	125	130	135	

Ile	His	Pro	Glu	Ser	Phe	Asn	Leu	Gln	Trp	Phe	Phe	Asn	Asp	Ser
				140					145					150
Cys	Ala	Pro	Pro	Thr	Gly	Phe	Asn	Lys	Pro	Thr	Ser	Asn	Asp	Thr
				155					160					165
Met	Ala	Ser	Gly	Trp	Arg	Ala	Ser	Ser	Phe	His	Phe	Asp	Ser	Glu
				170					175					180
Glu	Asn	Lys	His	Arg	Leu	Ile	His	Phe	Ser	Val	Phe	Leu	Gly	Leu
				185					190					195
Leu	Leu	Val	Gly	Ile	Leu	Glu	Val	Leu	Phe	Gly	Leu	Ser	Gln	Ile
				200					205					210
Val	Ile	Gly	Phe	Leu	Gly	Cys	Leu	Cys	Gly	Val	Ser	Lys	Arg	Arg
				215					220					225

Ser Gln Ile Val

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
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 caccatgagg ctgtcagtgt gtctcctgat ggtctcgctg gccctttgct 100
 gctaccaggc ccattgctctt gtctgcccag ctgttgcttc tgagatcaca 150
 gtctttcttat tottaagtga cgctgcggta aacctccaag ttgccaaact 200
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgatcagat atctttttaag aaacgactct cattgaaaaa gtcctgggtg 300
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctgggt 350
 tccaaagtct ttcaacgaca ccctgatctt cactaaaaat tgtaaagggt 400
 tcaacacggt gctttaataa atcacttgcc ctgc 434

<210> 260
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 260
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 1 5 10 15
 Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
 20 25 30
 Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln

	35		40		45
Val	Ala	Lys	Leu	Asn	Pro
				Pro	Pro
				Glu	Ala
				Leu	Ala
				Ala	Lys
				Leu	
				50	55
					60
Glu	Val	Lys	His	Cys	Thr
				Asp	Gln
				Ile	Ser
				Phe	Lys
				Lys	Arg
				Leu	
				65	70
					75
Ser	Leu	Lys	Lys	Ser	Trp
				Trp	Lys
				80	

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

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ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150
cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200
agagagtgac cctggccctt cctctactgg caggcctgac tgccttgga 250
gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300
aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350
ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400
cagcacagtc ctgtacctga gaaggccatc ccactcatca ctccaggctc 450
tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500
taacactggc ccccagcacc tcctcccctg ggaggcctta tcctcaagga 550
aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600
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<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met	Glu	Arg	Val	Thr	Leu	Ala	Leu	Leu	Leu	Leu	Ala	Gly	Leu	Thr
1					5					10				15
Ala	Leu	Glu	Ala	Asn	Asp	Pro	Phe	Ala	Asn	Lys	Asp	Asp	Pro	Phe
				20					25					30
Tyr	Tyr	Asp	Trp	Lys	Asn	Leu	Gln	Leu	Ser	Gly	Leu	Ile	Cys	Gly
				35					40					45

Gly	Leu	Leu	Ala	Ile	Ala	Gly	Ile	Ala	Ala	Val	Leu	Ser	Gly	Lys
				50					55					60
Cys	Lys	Tyr	Lys	Ser	Ser	Gln	Lys	Gln	His	Ser	Pro	Val	Pro	Glu
				65					70					75
Lys	Ala	Ile	Pro	Leu	Ile	Thr	Pro	Gly	Ser	Ala	Thr	Thr	Cys	
				80					85					

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

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actcctgctg ctggttgtgg gctcctggct actcgccgc atcctggctt 150
ggacctatgc cttctataac aactgccgc ggctccagtg tttccacag 200
ccccaaaac ggaactggtt ttggggtcac ctgggcctga tcaactctac 250
agaggagggc ttgaaggact cgaccagat gtcggcca tc tattccagg 300
gctttacggt atggtgggt cccatcatcc ccttcacgt tttatgccac 350
cctgacacca tccggtctat caccaatgcc tcagctgcc tgcaccaa 400
ggataatctc ttcacaggt tctgaagcc ctggctggga gaagggatac 450
tgctgagtgg cggtgacaag tggagccgc accgtcggat gctgacgccc 500
gccttcatt tcaacatcct gaagtctat ataacgatct tcaacaagag 550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650
cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700
atatattgcc accatcttgg agctcagtgc ccttgtagag aaaagaagcc 750
agcatatcct ccagcacatg gactttctgt attacctct ccatgacggg 800
cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgctgt 850
catccgggag cggcgtcgca cctccccac tcagggtatt gatgattttt 900
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950
ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
agaggctgac accttcattg ttggaggcca tgacaccacg gccagtggcc 1050
tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100

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tgccgacagg aggtgcaaga gcttctgaag gaccgcgata ctaaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcatctcccg atgctgcacc 1250
 caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350
 ctgaggtcta cgacccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctccga gggcccagga actgcatcgg 1450
 gcaggcgttc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
 tgcacttccg gttcctgcc aaccacactg agccccgcag gaagctggaa 1550
 ttgatcatgc gcgccgagg cgggctttgg ctgcgggtgg agcccctgaa 1600
 tgtaggcttg cagtgaactt ctgaccatc cacctgtttt tttgcagatt 1650
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 264

<211> 5'1

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala	1	5	10	15
Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu	20	25	30	
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys	35	40	45	
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe	50	55	60	
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys	65	70	75	
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val	80	85	90	
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp	95	100	105	
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys	110	115	120	
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly	125	130	135	
Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met				

	140		145		150
Leu Thr Pro Ala	Phe His Phe Asn Ile	Leu Lys Ser Tyr Ile Thr			
	155	160			165
Ile Phe Asn Lys	Ser Ala Asn Ile Met	Leu Asp Lys Trp Gln His			
	170	175			180
Leu Ala Ser Glu	Gly Ser Ser Arg Leu	Asp Met Phe Glu His Ile			
	185	190			195
Ser Leu Met Thr	Leu Asp Ser Leu Gln	Lys Cys Ile Phe Ser Phe			
	200	205			210
Asp Ser His Cys	Gln Glu Arg Pro Ser	Glu Tyr Ile Ala Thr Ile			
	215	220			225
Leu Glu Leu Ser	Ala Leu Val Glu Lys	Arg Ser Gln His Ile Leu			
	230	235			240
Gln His Met Asp	Phe Leu Tyr Tyr Leu	Ser His Asp Gly Arg Arg			
	245	250			255
Phe His Arg Ala	Cys Arg Leu Val His	Asp Phe Thr Asp Ala Val			
	260	265			270
Ile Arg Glu Arg	Arg Arg Thr Leu Pro	Thr Gln Gly Ile Asp Asp			
	275	280			285
Phe Phe Lys Asp	Lys Ala Lys Ser Lys	Thr Leu Asp Phe Ile Asp			
	290	295			300
Val Leu Leu Leu	Ser Lys Asp Glu Asp	Gly Lys Ala Leu Ser Asp			
	305	310			315
Glu Asp Ile Arg	Ala Glu Ala Asp Thr	Phe Met Phe Gly Gly His			
	320	325			330
Asp Thr Thr Ala	Ser Gly Leu Ser Trp	Val Leu Tyr Asn Leu Ala			
	335	340			345
Arg His Pro Glu	Tyr Gln Glu Arg Cys	Arg Gln Glu Val Gln Glu			
	350	355			360
Leu Leu Lys Asp	Arg Asp Pro Lys Glu	Ile Glu Trp Asp Asp Leu			
	365	370			375
Ala Gln Leu Pro	Phe Leu Thr Met Cys	Val Lys Glu Ser Leu Arg			
	380	385			390
Leu His Pro Pro	Ala Pro Phe Ile Ser	Arg Cys Cys Thr Gln Asp			
	395	400			405
Ile Val Leu Pro	Asp Gly Arg Val Ile	Pro Lys Gly Ile Thr Cys			
	410	415			420
Leu Ile Asp Ile	Ile Gly Val His His	Asn Pro Thr Val Trp Pro			
	425	430			435

Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser
				440					445				450	
Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460				465	
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475				480	
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490				495	
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505				510	
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265

<211> 584

<212> DNA

<213> Homo sapiens

<400> 265

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tcttcctctc cttgactcca gggaaatata ctttcaactc tcagcacctc 150
atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300
ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350
gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagt 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

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<210> 266

<211> 124

<212> PRT

<213> Homo sapiens

<400> 266

Met	Tyr	Lys	Leu	Ala	Ser	Cys	Cys	Leu	Leu	Phe	Thr	Gly	Phe	Leu
1				5						10				15

Asn	Pro	Leu	Leu	Ser	Leu	Pro	Leu	Leu	Asp	Ser	Arg	Glu	Ile	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	20		25		30									
Phe	Gln	Leu	Ser	Ala	Pro	His	Glu	Asp	Ala	Arg	Leu	Thr	Pro	Glu
			35						40					45
Glu	Leu	Glu	Arg	Ala	Ser	Leu	Leu	Gln	Ile	Leu	Pro	Glu	Met	Leu
			50						55					60
Gly	Ala	Glu	Arg	Gly	Asp	Ile	Leu	Arg	Lys	Ala	Asp	Ser	Ser	Thr
			65						70					75
Asn	Ile	Phe	Asn	Pro	Arg	Gly	Asn	Leu	Arg	Lys	Phe	Gln	Asp	Phe
			80						85					90
Ser	Gly	Gln	Asp	Pro	Asn	Ile	Leu	Leu	Ser	His	Leu	Leu	Ala	Arg
			95						100					105
Ile	Trp	Lys	Pro	Tyr	Lys	Lys	Arg	Glu	Thr	Pro	Asp	Cys	Phe	Trp
			110						115					120

Lys Tyr Cys Val

<210> 267
 <211> 654
 <212> DNA
 <213> Homo sapiens

<400> 267
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 acctgtctgc aaccagctg aggccatgcc ctcccaggga accgtctgca 200
 gcctcctgct cctcggtatg ctctggctgg acttggccat ggcaggctcc 250
 agcttctctga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
 gaagccacca gccaaagctgc agcccogagc tctagcaggc tggctccgcc 350
 cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400
 ttcaacgccc cctttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
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 ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgcag 600
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<210> 268

<211> 117

<212> PRT

<213> Homo sapiens

<400> 268

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 1          5          10          15

Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
          20          25          30

Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
          35          40          45

Ala Lys Leu Gln Pro Arg Ala Leu Ala Gly Trp Leu Arg Pro Glu
          50          55          60

Asp Gly Gly Gln Ala Glu Gly Ala Glu Asp Glu Leu Glu Val Arg
          65          70          75

Phe Asn Ala Pro Phe Asp Val Gly Ile Lys Leu Ser Gly Val Gln
          80          85          90

Tyr Gln Gln His Ser Gln Ala Leu Gly Lys Phe Leu Gln Asp Ile
          95          100          105

Leu Trp Glu Glu Ala Lys Glu Ala Pro Ala Asp Lys
          110          115
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<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

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cagaccctga tagtcgtgat catcgggatg ctcgtgctcc tgctggactt 200
tcttggettg gtgcacctgg gccagctgct catcttccac atctacctga 250
gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
gctgctcatc ttacacctct acttgagtat gtcctaacc ctgagcccc 350
cacgcctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
cagcctctcc cagaagtgag atcatggaca aaaagggcaa atcacaggaa 450
gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550
tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
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aaataaggac aggtggactt ccaaaaacac aagtagaat tctaacaatg 650
 aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700
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<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

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Gln	Thr	Leu	Ile	Val	Val	Ile	Ile	Gly	Met	Leu	Val	Leu	Leu	Leu
				20					25					30
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
				35					40					45
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
				50					55					60
Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
				65					70					75
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
				80					85					90
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
				95					100					105
Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met

	110		115		120									
Arg	Thr	Gln	Gln	Ala	Gln	Gln	Glu	Ala	Glu	Leu	Thr	Pro	Arg	Pro
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Ala	Gly	Val	Val	Pro	Gly	Ala								
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<210> 271

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 271

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<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

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Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val	35	40	45	
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Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu	65	70	75	
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe	80	85	90	
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val	95	100	105	
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro	110	115	120	
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu	125	130	135	
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu	140	145	150	
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly	155	160	165	
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg	170	175	180	

Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr
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His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys
				200					205					210
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His
				215					220					225
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg
				230					235					240
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His
				245					250					255
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His
				260					265					270
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<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

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<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

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Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln
				20					25					30
Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn
				35					40					45
Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly
				50					55					60
Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg
				65					70					75
Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu				
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<210> 275

<211> 2694

<212> DNA

<213> Homo sapiens

<400> 275

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<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

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			20					25						30
Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser
				35				40						45
Pro	Ile	Pro	Tyr	Cys	Ile	Ala	Arg	Arg	Leu	Val	Asp	Asp	Thr	Asp
				50				55						60
Ala	Met	Ser	Asn	Ala	Cys	Lys	Glu	Leu	Ala	Ile	Phe	Leu	Thr	Thr
				65				70						75

Gly	Ile	Val	Val	Ser	Ala	Phe	Gly	Leu	Pro	Ile	Val	Phe	Ala	Arg
				80					85					90
Ala	His	Leu	Ile	Glu	Trp	Gly	Ala	Cys	Ala	Leu	Val	Leu	Thr	Gly
				95					100					105
Asn	Thr	Val	Ile	Phe	Ala	Thr	Ile	Leu	Gly	Phe	Phe	Leu	Val	Phe
				110					115					120
Gly	Ser	Asn	Asp	Asp	Phe	Ser	Trp	Gln	Gln	Trp				
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<210> 277

<211> 4104

<212> DNA

<213> Homo sapiens

<400> 277

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<210> 278

<211> 522

<212> PRT

<213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg	1	5	10	15
Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	20	25	30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	35	40	45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	50	55	60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	65	70	75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	80	85	90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	95	100	105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	110	115	120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	125	130	135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	140	145	150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	155	160	165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	170	175	180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	185	190	195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	200	205	210	

Leu Thr Glu Leu His	Leu Glu His Asn	Asp Leu Val Lys Val	Asn
215	220		225
Phe Ala His Phe Pro	Arg Leu Ile Ser	Leu His Ser Leu Cys	Leu
230	235		240
Arg Arg Asn Lys Val	Ala Ile Val Val	Ser Ser Leu Asp Trp	Val
245	250		255
Trp Asn Leu Glu Lys	Met Asp Leu Ser	Gly Asn Glu Ile Glu	Tyr
260	265		270
Met Glu Pro His Val	Phe Glu Thr Val	Pro His Leu Gln Ser	Leu
275	280		285
Gln Leu Asp Ser Asn	Arg Leu Thr Tyr	Ile Glu Pro Arg Ile	Leu
290	295		300
Asn Ser Trp Lys Ser	Leu Thr Ser Ile	Thr Leu Ala Gly Asn	Leu
305	310		315
Trp Asp Cys Gly Arg	Asn Val Cys Ala	Leu Ala Ser Trp Leu	Ser
320	325		330
Asn Phe Gln Gly Arg	Tyr Asp Gly Asn	Leu Gln Cys Ala Ser	Pro
335	340		345
Glu Tyr Ala Gln Gly	Glu Asp Val Leu	Asp Ala Val Tyr Ala	Phe
350	355		360
His Leu Cys Glu Asp	Gly Ala Glu Pro	Thr Ser Gly His Leu	Leu
365	370		375
Ser Ala Val Thr Asn	Arg Ser Asp Leu	Gly Pro Pro Ala Ser	Ser
380	385		390
Ala Thr Thr Leu Ala	Asp Gly Gly Glu	Gly Gln His Asp Gly	Thr
395	400		405
Phe Glu Pro Ala Thr	Val Ala Leu Pro	Gly Gly Glu His Ala	Glu
410	415		420
Asn Ala Val Gln Ile	His Lys Val Val	Thr Gly Thr Met Ala	Leu
425	430		435
Ile Phe Ser Phe Leu	Ile Val Val Leu	Val Leu Tyr Val Ser	Trp
440	445		450
Lys Cys Phe Pro Ala	Ser Leu Arg Gln	Leu Arg Gln Cys Phe	Val
455	460		465
Thr Gln Arg Arg Lys	Gln Lys Gln Lys	Gln Thr Met His Gln	Met
470	475		480
Ala Ala Met Ser Ala	Gln Glu Tyr Tyr	Val Asp Tyr Lys Pro	Asn
485	490		495
His Ile Glu Gly Ala	Leu Val Ile Ile	Asn Glu Tyr Gly Ser	Cys

	500	505	510
Thr Cys His Gln Gln Pro Ala Arg Glu Cys Glu Val			
	515	520	

<210> 279
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 279
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<210> 280
 <211> 709
 <212> DNA
 <213> Homo sapiens

<400> 280
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 ccggcggcgc cgttgagttc ccggcggaca agatggtgtc agtcctggtg 200
 caagaaggtc acgcgtctc agacatgtc ctgcctgtgg atggggaact 250
 cgtcctggct tcaggagccg gattcggcgt ctgagacgtg ggctcgacc 300
 tggactgtgg cgcgggcgaa cctgcctgtc tccgcgactc tgaccgttc 350
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 cttcttcgtg gacgcgcgag gcgtgccctg ccgccacgac gacgtcttct 450
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 gtgcgtgtcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550
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 ggccgggcgc gctgagcgtg ggccccgagg actgcgcgga cccgtcgggc 650
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<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281

Met	Gly	Val	Leu	Gly	Arg	Val	Leu	Leu	Trp	Leu	Gln	Leu	Cys	Ala	1	5	10	15
Leu	Thr	Gln	Ala	Val	Ser	Lys	Leu	Trp	Val	Pro	Asn	Thr	Asp	Phe	20	25	30	
Asp	Val	Ala	Ala	Asn	Trp	Ser	Gln	Asn	Arg	Thr	Pro	Cys	Ala	Gly	35	40	45	
Gly	Ala	Val	Glu	Phe	Pro	Ala	Asp	Lys	Met	Val	Ser	Val	Leu	Val	50	55	60	
Gln	Glu	Gly	His	Ala	Val	Ser	Asp	Met	Leu	Leu	Pro	Leu	Asp	Gly	65	70	75	
Glu	Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Phe	Gly	Val	Ser	Asp	Val	80	85	90	
Gly	Ser	His	Leu	Asp	Cys	Gly	Ala	Gly	Glu	Pro	Ala	Val	Phe	Arg	95	100	105	
Asp	Ser	Asp	Arg	Phe	Ser	Trp	His	Asp	Pro	His	Leu	Trp	Arg	Ser	110	115	120	
Gly	Asp	Glu	Ala	Pro	Gly	Leu	Phe	Phe	Val	Asp	Ala	Glu	Arg	Val	125	130	135	
Pro	Cys	Arg	His	Asp	Asp	Val	Phe	Phe	Pro	Pro	Ser	Ala	Ser	Phe	140	145	150	
Arg	Val	Gly	Leu	Gly	Pro	Gly	Ala	Ser	Pro	Val	Arg	Val	Arg	Ser	155	160	165	
Ile	Ser	Ala	Leu	Gly	Arg	Thr	Phe	Thr	Arg	Asp	Glu	Asp	Leu	Ala	170	175	180	
Val	Phe	Leu	Ala	Ser	Arg	Ala	Gly	Arg	Leu	Arg	Phe	His	Gly	Pro	185	190	195	
Gly	Ala	Leu	Ser	Val	Gly	Pro	Glu	Asp	Cys	Ala	Asp	Pro	Ser	Gly	200	205	210	
Cys	Val	Cys	Gly	Asn	Ala	Glu	Ala	Gln	Pro	Trp	Ile	Cys	Ala	Ala	215	220	225	
Leu	Leu	Gln	Pro															

<210> 282

<211> 644

<212> DNA

<213> Homo sapiens

<400> 282

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tgtgttttgc acttaccctg tggtctgcct tttggtggca taacaaggga 150
 cttgcactta tcttctgcat tttgcagtct ttggcattga cgtggtacag 200
 cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgccg 250
 tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
 tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350
 tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400
 catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
 cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500
 cctcatgtac ctgtttcctc tctggatggt gtccactga attcccatga 550
 atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283

<211> 77

<212> PRT

<213> Homo sapiens

<400> 283

Met	Gly	Pro	Val	Lys	Gln	Leu	Lys	Arg	Met	Phe	Glu	Pro	Thr	Arg
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Leu	Ile	Ala	Thr	Ile	Met	Val	Leu	Leu	Cys	Phe	Ala	Leu	Thr	Leu
				20					25					30
Cys	Ser	Ala	Phe	Trp	Trp	His	Asn	Lys	Gly	Leu	Ala	Leu	Ile	Phe
				35					40					45
Cys	Ile	Leu	Gln	Ser	Leu	Ala	Leu	Thr	Trp	Tyr	Ser	Leu	Ser	Phe
				50					55					60
Ile	Pro	Phe	Ala	Arg	Asp	Ala	Val	Lys	Lys	Cys	Phe	Ala	Val	Cys
				65					70					75

Leu Ala

<210> 284

<211> 2623

<212> DNA

<213> Homo sapiens

<400> 284

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 ctcccgttgc tccaaactaa tacggactga acggatcgct gcgagggtgg 150

gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
ccagatagat tatcttacac tgaactgac aagtactttg aaaatgactt 250
cgaaatttat cttggtgtcc ttcatacttg ctgcactgag tctttcaacc 300
accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350
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atattatgaa atatggtggt cacgtgaagc aagttactaa tgtttttatt 450
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<210> 285

<211> 477

<212> PRT

<213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu
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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val
				20					25					30

Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
				35					40					45

Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

				50					55					60
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
				65					70					75
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
				80					85					90
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
				95					100					105
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala
				110					115					120
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly
				125					130					135
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe
				140					145					150
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp
				155					160					165
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile
				170					175					180
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His
				185					190					195
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp
				200					205					210
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala
				215					220					225
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly
				230					235					240
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr
				245					250					255
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala
				260					265					270
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala
				275					280					285
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp
				290					295					300
Val	Pro	Glu	Arg	Trp	His	Tyr	Lys	Tyr	Asn	Ser	Arg	Ile	Gln	Pro
				305					310					315
Ile	Ile	Ala	Val	Ala	Asp	Glu	Gly	Trp	His	Ile	Leu	Gln	Asn	Lys
				320					325					330
Ser	Asp	Asp	Phe	Leu	Leu	Gly	Asn	His	Gly	Tyr	Asp	Asn	Ala	Leu
				335					340					345

Ala	Asp	Met	His	Pro	Ile	Phe	Leu	Ala	His	Gly	Pro	Ala	Phe	Arg
				350					355					360
Lys	Asn	Phe	Ser	Lys	Glu	Ala	Met	Asn	Ser	Thr	Asp	Leu	Tyr	Pro
				365					370					375
Leu	Leu	Cys	His	Leu	Leu	Asn	Ile	Thr	Ala	Met	Pro	His	Asn	Gly
				380					385					390
Ser	Phe	Trp	Asn	Val	Gln	Asp	Leu	Leu	Asn	Ser	Ala	Met	Pro	Arg
				395					400					405
Val	Val	Pro	Tyr	Thr	Gln	Ser	Thr	Ile	Leu	Leu	Pro	Gly	Ser	Val
				410					415					420
Lys	Pro	Ala	Glu	Tyr	Asp	Gln	Glu	Gly	Ser	Tyr	Pro	Tyr	Phe	Ile
				425					430					435
Gly	Val	Ser	Leu	Gly	Ser	Ile	Ile	Val	Ile	Val	Phe	Phe	Val	Ile
				440					445					450
Phe	Ile	Lys	His	Leu	Ile	His	Ser	Gln	Ile	Pro	Ala	Leu	Gln	Asp
				455					460					465
Met	His	Ala	Glu	Ile	Ala	Gln	Pro	Leu	Leu	Gln	Ala			
				470					475					

<210> 286

<211> 1337

<212> DNA

<213> Homo sapiens

<400> 286

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agaataacta tgctgccatg gtattccact acatgagcat caccatcttg 650

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<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
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Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
				20					25					30
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
				35					40					45
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
				50					55					60
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala
				65					70					75
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
				80					85					90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
				95					100					105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
				110					115					120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala	125	130	135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe	140	145	150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser	155	160	165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val	170	175	180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe	185	190	195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala	200	205	210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu	215	220	225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala	230	235	240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp	245	250	255

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

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Lys	Asp	Leu	Asp	Gly	Gln	Leu	Asp	Phe	Glu	Glu	Phe	Val	His	Tyr	
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Leu	Gln	Asp	His	Glu	Lys	Lys	Leu	Arg	Leu	Val	Phe	Lys	Ile	Leu	
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Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	
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Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	
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Gly Val Ala Ala	Phe Tyr Lys Gly Tyr	Val Pro Asn Met Leu	Gly		
	335		340		345
Ile Ile Pro Tyr	Ala Gly Ile Asp Leu	Ala Val Tyr Glu Thr	Leu		
	350		355		360
Lys Asn Ala Trp	Leu Gln His Tyr Ala	Val Asn Ser Ala Asp	Pro		
	365		370		375
Gly Val Phe Val	Leu Leu Ala Cys Gly	Thr Met Ser Ser Thr	Cys		
	380		385		390
Gly Gln Leu Ala	Ser Tyr Pro Leu Ala	Leu Val Arg Thr Arg	Met		
	395		400		405
Gln Ala Gln Ala	Ser Ile Glu Gly Ala	Pro Glu Val Thr Met	Ser		
	410		415		420
Ser Leu Phe Lys	His Ile Leu Arg Thr	Glu Gly Ala Phe Gly	Leu		
	425		430		435
Tyr Arg Gly Leu	Ala Pro Asn Phe Met	Lys Val Ile Pro Ala	Val		
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Ser Ile Ser Tyr	Val Val Tyr Glu Asn	Leu Lys Ile Thr Leu	Gly		
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Val Gln Ser Arg

<210> 290

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 290

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atttcaggga gacactccat cacagtcaact actgtcgcct cagctgggaa 200
cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
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<210> 291

<211> 282

<212> PRT

<213> Homo sapiens

<400> 291

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Ile	Ser	Gly	Arg	His	Ser	Ile	Thr	Val	Thr	Thr	Val	Ala	Ser	Ala		35	40	45
Gly	Asn	Ile	Gly	Glu	Asp	Gly	Ile	Leu	Ser	Cys	Thr	Phe	Glu	Pro		50	55	60
Asp	Ile	Lys	Leu	Ser	Asp	Ile	Val	Ile	Gln	Trp	Leu	Lys	Glu	Gly		65	70	75
Val	Leu	Gly	Leu	Val	His	Glu	Phe	Lys	Glu	Gly	Lys	Asp	Glu	Leu		80	85	90
Ser	Glu	Gln	Asp	Glu	Met	Phe	Arg	Gly	Arg	Thr	Ala	Val	Phe	Ala		95	100	105
Asp	Gln	Val	Ile	Val	Gly	Asn	Ala	Ser	Leu	Arg	Leu	Lys	Asn	Val		110	115	120
Gln	Leu	Thr	Asp	Ala	Gly	Thr	Tyr	Lys	Cys	Tyr	Ile	Ile	Thr	Ser		125	130	135
Lys	Gly	Lys	Gly	Asn	Ala	Asn	Leu	Glu	Tyr	Lys	Thr	Gly	Ala	Phe		140	145	150
Ser	Met	Pro	Glu	Val	Asn	Val	Asp	Tyr	Asn	Ala	Ser	Ser	Glu	Thr		155	160	165
Leu	Arg	Cys	Glu	Ala	Pro	Arg	Trp	Phe	Pro	Gln	Pro	Thr	Val	Val		170	175	180
Trp	Ala	Ser	Gln	Val	Asp	Gln	Gly	Ala	Asn	Phe	Ser	Glu	Val	Ser		185	190	195
Asn	Thr	Ser	Phe	Glu	Leu	Asn	Ser	Glu	Asn	Val	Thr	Met	Lys	Val		200	205	210
Val	Ser	Val	Leu	Tyr	Asn	Val	Thr	Ile	Asn	Asn	Thr	Tyr	Ser	Cys		215	220	225
Met	Ile	Glu	Asn	Asp	Ile	Ala	Lys	Ala	Thr	Gly	Asp	Ile	Lys	Val		230	235	240
Thr	Glu	Ser	Glu	Ile	Lys	Arg	Arg	Ser	His	Leu	Gln	Leu	Leu	Asn		245	250	255
Ser	Lys	Ala	Ser	Leu	Cys	Val	Ser	Ser	Phe	Phe	Ala	Ile	Ser	Trp		260	265	270
Ala	Leu	Leu	Pro	Leu	Ser	Pro	Tyr	Leu	Met	Leu	Lys					275	280	

<210> 292

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 292

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<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

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			20					25						30
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu
			35					40						45
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro
			50					55						60
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu
			65					70						75
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu
			80					85						90
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp
			95					100						105
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln
			110					115						120
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro
			125					130						135
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro
			140					145						150
Phe	Pro	Leu	Gln	Leu	Phe	Cys	Phe	Leu	Val	Ala	Ile	Arg	Val	Pro
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<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200

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<210> 295
 <211> 237
 <212> PRT
 <213> Homo sapiens

<400> 295
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 Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn
 35 40 45
 Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
 50 55 60

Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser	
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Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu	
				80					85					90	
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys	
				95					100					105	
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser	
				110					115					120	
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser	
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Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Glu	Gln	Cys	Val	
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Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu	
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Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe	
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Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys	
				185					190					195	
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro	
				200					205					210	
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu	
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Ala	Leu	Ala	Ser	Leu	Leu	Leu	Arg	Gly	Leu	Leu	Pro				
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 <212> DNA
 <213> Homo sapiens

<400> 296
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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20					25					30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp
				65					70					75
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
				80					85					90

Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly	95	100	105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr	110	115	120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser	125	130	135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu	140	145	150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu	155	160	165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser	170	175	180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser	185	190	195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His	200	205	210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys	215	220	225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln	230	235	240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys	245	250	255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr	260	265	270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr	275	280	285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu	290	295	300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val	305	310	315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe	320	325	330
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<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

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Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala					
				35					40					45					
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala					
				50					55					60					
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val					
				65					70					75					
Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe					
				80					85					90					
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro					
				95					100					105					
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val					
				110					115					120					
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met					
				125					130					135					
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp					
				140					145					150					
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu					
				155					160					165					
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile					
				170					175					180					
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val					
				185					190					195					
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His					
				200					205					210					
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu					
				215					220					225					
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu					
				230					235					240					
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys					
				245					250					255					
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu					
				260					265					270					
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala					
				275					280					285					
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser					
				290					295					300					
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp					
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<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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<210> 301

<211> 461

<212> PRT

<213> Homo sapiens

<400> 301

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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr				

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Asp Met Gln Ile	Met Val Arg Leu Ile	Asn Lys Phe Asn Ser	Ser		
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Ser Ser Ser Leu	Glu Glu Lys Ile Ala	Ala Leu Phe Asp Leu	Glu		
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Tyr Tyr Val His	Gln Met Asp Asn Ala	Gln Asp Leu Leu Ser	Phe		
	215		220		225
Gly Gly Leu Gln	Val Val Ile Asn Gly	Leu Asn Ser Thr Glu	Pro		
	230		235		240
Leu Val Lys Glu	Tyr Ala Ala Phe Val	Leu Gly Ala Ala Phe	Ser		
	245		250		255
Ser Asn Pro Lys	Val Gln Val Glu Ala	Ile Glu Gly Gly Ala	Leu		
	260		265		270
Gln Lys Leu Leu	Val Ile Leu Ala Thr	Glu Gln Pro Leu Thr	Ala		
	275		280		285
Lys Lys Lys Val	Leu Phe Ala Leu Cys	Ser Leu Leu Arg His	Phe		
	290		295		300
Pro Tyr Ala Gln	Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln	Val		
	305		310		315
Leu Arg Thr Leu	Val Gln Glu Lys Gly	Thr Glu Val Leu Ala	Val		
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Arg Val Val Thr	Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met	Phe		
	335		340		345
Ala Glu Glu Glu	Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu	Lys		
	350		355		360
Leu Gln Gln Tyr	Arg Gln Val His Leu	Leu Pro Gly Leu Trp	Glu		
	365		370		375
Gln Gly Trp Cys	Glu Ile Thr Ala His	Leu Leu Ala Leu Pro	Glu		
	380		385		390
His Asp Ala Arg	Glu Lys Val Leu Gln	Thr Leu Gly Val Leu	Leu		
	395		400		405
Thr Thr Cys Arg	Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly	Arg		
	410		415		420
Thr Leu Ala Ser	Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser	Leu		
	425		430		435
Glu Leu Gln Asp	Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu	Leu		
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<211> 2136
<212> DNA
<213> Homo sapiens

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 aacctccttg ggetatatatt tctctcctcg agttgctcct catggctggg 1700
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 aagtgcattg ttgggaactg gcattactgg aactaatggg tttaacctcc 1800
 ttaaccacca gcacccctcc tctcccaag gtgaagtggg ggggtgctgtg 1850
 gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900
 atgacatcgt aggggaaggag gggagatttt tttgtagttt ttaattgggg 1950
 tgtgggaggg gcggggaggt tttctataaa ctgtatcatt ttctgctgag 2000
 ggtggagtgt cccatccttt taatcaaggg gattgtgatt ttgactaata 2050
 aaaaagaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303

<211> 247

<212> PRT

<213> Homo sapiens

<400> 303

Met	Gly	Ala	Ala	Val	Phe	Phe	Gly	Cys	Thr	Phe	Val	Ala	Phe	Gly
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Pro	Ala	Phe	Ala	Leu	Phe	Leu	Ile	Thr	Val	Ala	Gly	Asp	Pro	Leu
				20					25					30
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser
				35					40					45
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr
				50					55					60
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly
				65					70					75
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr
				80					85					90

Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
				95					100					105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
				110					115					120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
				125					130					135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
				140					145					150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
				155					160					165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
				230					235					240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp									
				245											

<210> 304

<211> 240

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 108, 123, 126, 154, 198, 206, 217

<223> unknown base

<400> 304

aagctggttt aaggaagcag aggagggtta gattcggtga gtgaggacgg 50

aagatcaacc catttccatt ccgccagatg gcctatgttt ctggctcttc 100

ccttcggnat catcagtggg gtnttntctg ttatcaatat tttggctgat 150

gcanttgggc caggtgtggg tgggatccat ggagactcac cctattantt 200

cctganttca gccttntga cagcagccat tatectgctc 240

<210> 305

<211> 378

<212> DNA

<213> Homo sapiens

<220>
 <221> unsure
 <222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
 <223> unknown base

<400> 305
 gaccgaccgt tcagatgccc ggttccagta cggcttcctg atttttggtg 50
 ctgctgtntc tgtccttcta caggagggtgt tccgctttgc ctantacaag 100
 ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150
 atcaccatt tccatccgcc agatggccta tgtttntggt ntttccttcg 200
 gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250
 gggccagggtg tgggtgggat ccatggagan tcacctatt aattcctgaa 300
 ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
 ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
 <211> 655
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1, 22, 129, 133, 184
 <223> unknown base

<400> 306
 ngttggagaa gtggcgcgga cnttcatttg ggggttcggt tccccccctt 50
 tccctttccc cgggggtctgg ggtgacattg cacgggcccc tegtggggtc 100
 gcgttgccac cccacgcgga ctccccagnt ggnngcgccct tccatttgc 150
 ctgtcctggt caggccccca ccccccttc cactgacca gccatggggg 200
 ctgagggtgtt tttcggtgc actttcgteg cgttcggccc ggcccttcgcg 250
 cttttcttga tcaactgtggc tggggacccg cttecggtta tcatcctggt 300
 cgcaggggca tttttctggc tgggtctccct gctcctggcc tctgtggtct 350
 ggttcattctt ggtccatgtg accgaccggt cagatgccc gctccagtac 400
 ggccctcctga tttttggtgc tgctgtctct gtccttctac aggagggtgt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag ggggttagcat 500
 cgctgagtga ggacggaaga tcacctatct ccacccgcca gatggcctat 550
 gtttctgggc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggct gatgcacttg ggccagggtg ggttgggatc catggagact 650

caccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
 gtaaaagaaa gtggccggac cttcattggg gtttcgggtc cccctttcc 50
 cnttccccgg ggtctggggg tgacattgca ccgcgccnt cgtggggtcg 100
 cgttgccacc ccacgcggac tccccagntg gcgcgccct cccatttgcc 150
 tgtcctggtc aggccccac ccccttccc acctgaccag ccatggggc 200
 tgcggtgttt ttcggtctgc actttcgctg cgttcggggc cggccttcgc 250
 gcttttcttg atcactgtgg ctggggaccc gcttcgcgtt atcatcctgg 300
 tcgcaggggc atttttctgg ctggtctccc tgctcctggc ctctgtgtc 350
 tggttcatct tggccatgt gaccgaccgg tcagatgcc ggctccagta 400
 cggcctcctg atttttggtg ctgctgtctc tgctcttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggacggaag atcaccatc tccatccgcc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctt tctgttatca 600
 atattttggc tgatgcactt gggccagggtg tggttgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
 gccccaggga gcagtgggtg gttataactc aggcccggtg cccagagccc 50
 aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100
 gctgggagca aatccccac cccctacctg ggggacagg caagtgagac 150
 ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgcgtcct 200
 gcaccacat ctttctctgt cccctccttg ccctgtctgg aggtgctag 250
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgccgat 300
 ggtggcccg ccttctggtt cctctctacc tggggaaata aggtgcagcg 350

gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
 tttcctgtga ccacccctct aacaccgtgc cctctgggag caaccaggac 500
 ctgggagctg gggccgggga agacgcccg tggatgaca gcagcagccg 550
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
 cgctgttgct aaggcccaac cagctctact gcggggcggt gttggtgcat 650
 ccacagtggc tgetcacggc cgcccactgc aggaagaaag ttttcagagt 700
 ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750
 tgttccaggg ggtcaaatec atccccacc ctggctactc ccaccctggc 800
 cactctaacg acctcatgct catcaaactg aacagaagaa ttcgtccac 850
 taaagatgtc agaccatca acgtctctc tcattgtccc tctgctggga 900
 caaagtgctt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
 ttccctaagg tcctccagtg cttgaatate agcgtgctaa gtcagaaaag 1000
 gtgcgaggat gcttaccga gacagataga tgacaccatg ttctgcgcg 1050
 gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150
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 agaccctcat tccttcccag agatgttgag aatgttcate tctccagccc 1350
 ctgaccccat gtctcctgga ctcagggtct gcttccccca cattgggctg 1400
 accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450
 gcggggggtg cgtctcaate tcctggggc actttcatcc tcaagctcag 1500
 ggcccatccc ttctctgcag ctctgaccca aatttagtcc cagaaataaa 1550
 ctgagaagtg gaaaaaaaaa 1570

<210> 309

<211> 293

<212> PRT

<213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu
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Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn	
				20					25					30	
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly	
				35					40					45	
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser	
				50					55					60	
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met	
				65					70					75	
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln	
				80					85					90	
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr	
				95					100					105	
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His	
				110					115					120	
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln	
				125					130					135	
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His	
				140					145					150	
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro	
				155					160					165	
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser	
				170					175					180	
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser	
				185					190					195	
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser	
				200					205					210	
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile	
				215					220					225	
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser	
				230					235					240	
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu	
				245					250					255	
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn	
				260					265					270	
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile	
				275					280					285	
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser								
				290											

<210> 310

<211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 310
 tcctgtgacc acccctctaa cacc 24

 <210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 311
 ctggaacatc tgctgcccag attc 24

 <210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 312
 gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

 <210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

 <400> 313
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 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgcgc ggcacggcgc cccacactgt 200
 cgtcagcact ggggctgcca gcgccaacag cgccctggtc actgtggaaa 250
 gggcggacag ctgcacctc agcatcctca ttgaccgcgc ctgccccgac 300
 ctcaccgaca gcttcgcacg cctggagagc gccagggcct cgggtgctgca 350
 ggcgctgaca gagcaccagg ccagccacg gctggtgggc gaccaggagc 400
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggcccga 450
 gcctcagagc tgcagacgga gtgcatgggg ctgcggaagg ggcattggcac 500

gctgggccag ggcctcagcg cctgcagag tgagcagggc cgctcatcc 550
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agcgacatcc tggatgccct gcagagggac cgggggctgg gccggccccg 650
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gctgtgccac tggctcccgg ccccgagact gtctggacgt cctcctaagc 750
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 gggagaggcc gtgtgacctg gctctctgtc ccagtgccac caggtcatcc 3000
 acatgcgcag 3010

<210> 314

<211> 461

<212> PRT

<213> Homo sapiens

<400> 314

Met	Val	Asn	Asp	Arg	Trp	Lys	Thr	Met	Gly	Gly	Ala	Ala	Gln	Leu
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Glu	Asp	Arg	Pro	Arg	Asp	Lys	Pro	Gln	Arg	Pro	Ser	Cys	Gly	Tyr
				20					25					30

Val	Leu	Cys	Thr	Val	Leu	Leu	Ala	Leu	Ala	Val	Leu	Leu	Ala	Val
				35				40						45

Ala Val Thr Gly	Ala Val Leu Phe Leu	Asn His Ala His Ala	Pro
	50	55	60
Gly Thr Ala Pro	Pro Pro Val Val Ser	Thr Gly Ala Ala Ser	Ala
	65	70	75
Asn Ser Ala Leu	Val Thr Val Glu Arg	Ala Asp Ser Ser His	Leu
	80	85	90
Ser Ile Leu Ile	Asp Pro Arg Cys Pro	Asp Leu Thr Asp Ser	Phe
	95	100	105
Ala Arg Leu Glu	Ser Ala Gln Ala Ser	Val Leu Gln Ala Leu	Thr
	110	115	120
Glu His Gln Ala	Gln Pro Arg Leu Val	Gly Asp Gln Glu Gln	Glu
	125	130	135
Leu Leu Asp Thr	Leu Ala Asp Gln Leu	Pro Arg Leu Leu Ala	Arg
	140	145	150
Ala Ser Glu Leu	Gln Thr Glu Cys Met	Gly Leu Arg Lys Gly	His
	155	160	165
Gly Thr Leu Gly	Gln Gly Leu Ser Ala	Leu Gln Ser Glu Gln	Gly
	170	175	180
Arg Leu Ile Gln	Leu Leu Ser Glu Ser	Gln Gly His Met Ala	His
	185	190	195
Leu Val Asn Ser	Val Ser Asp Ile Leu	Asp Ala Leu Gln Arg	Asp
	200	205	210
Arg Gly Leu Gly	Arg Pro Arg Asn Lys	Ala Asp Leu Gln Arg	Ala
	215	220	225
Pro Ala Arg Gly	Thr Arg Pro Arg Gly	Cys Ala Thr Gly Ser	Arg
	230	235	240
Pro Arg Asp Cys	Leu Asp Val Leu Leu	Ser Gly Gln Gln Asp	Asp
	245	250	255
Gly Val Tyr Ser	Val Phe Pro Thr His	Tyr Pro Ala Gly Phe	Gln
	260	265	270
Val Tyr Cys Asp	Met Arg Thr Asp Gly	Gly Gly Trp Thr Val	Phe
	275	280	285
Gln Arg Arg Glu	Asp Gly Ser Val Asn	Phe Phe Arg Gly Trp	Asp
	290	295	300
Ala Tyr Arg Asp	Gly Phe Gly Arg Leu	Thr Gly Glu His Trp	Leu
	305	310	315
Gly Leu Lys Arg	Ile His Ala Leu Thr	Thr Gln Ala Ala Tyr	Glu
	320	325	330
Leu His Val Asp	Leu Glu Asp Phe Glu	Asn Gly Thr Ala Tyr	Ala

	335		340		345
Arg Tyr Gly Ser	Phe Gly Val Gly Leu	Phe Ser Val Asp Pro	Glu		
	350	355	360		
Glu Asp Gly Tyr	Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr	Ala		
	365	370	375		
Gly Asp Ser Leu	Leu Lys His Ser Gly	Met Arg Phe Thr Thr	Lys		
	380	385	390		
Asp Arg Asp Ser	Asp His Ser Glu Asn	Asn Cys Ala Ala Phe	Tyr		
	395	400	405		
Arg Gly Ala Trp	Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu	Asn		
	410	415	420		
Gly Gln Tyr Leu	Arg Gly Ala His Ala	Ser Tyr Ala Asp Gly	Val		
	425	430	435		
Glu Trp Ser Ser	Trp Thr Gly Trp Gln	Tyr Ser Leu Lys Phe	Ser		
	440	445	450		
Glu Met Lys Ile	Arg Pro Val Arg Glu	Asp Arg			
	455	460			

<210> 315
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 315
 cacacgtcca acctcaatgg gcag 24

<210> 316
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 316
 gaccagcagg gccaaaggaca agg 23

<210> 317
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 317
 gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 318
 gcagtcagag acttccccctg cccctcgctg ggaaagaaca ttaggaatgc 50
 ctttttagtgc cttgcttctt gaactagctc acagtagccc ggcgccccag 100
 ggcaatecga ccacatttca ctctcaccgc tgtaggaatc cagatgcagg 150
 ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
 atgagcctgc attctcaagc ctctgccaca actcggcata cagagccccg 250
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<211> 280

<212> PRT

<213> Homo sapiens

<400> 319

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				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
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Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
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Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
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Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
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Phe Tyr Lys Asp Ser Lys Ser Trp Glu Asp Cys Lys Tyr Phe Cys	155	160	165
Leu Ser Glu Asn Ser Thr Met Leu Lys Ile Asn Lys Gln Glu Asp	170	175	180
Leu Glu Phe Ala Ala Ser Gln Ser Tyr Ser Glu Phe Phe Tyr Ser	185	190	195
Tyr Trp Thr Gly Leu Leu Arg Pro Asp Ser Gly Lys Ala Trp Leu	200	205	210
Trp Met Asp Gly Thr Pro Phe Thr Ser Glu Leu Phe His Ile Ile	215	220	225
Ile Asp Val Thr Ser Pro Arg Ser Arg Asp Cys Val Ala Ile Leu	230	235	240
Asn Gly Met Ile Phe Ser Lys Asp Cys Lys Glu Leu Lys Arg Cys	245	250	255
Val Cys Glu Arg Arg Ala Gly Met Val Lys Pro Glu Ser Leu His	260	265	270
Val Pro Pro Glu Thr Leu Gly Glu Gly Asp	275	280	

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<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 59, 95, 149, 331, 364, 438, 446

<223> unknown base

<400> 320

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atacacacac cacttccc 468

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 <210> 322
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 <210> 323
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<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

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Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro	35	40	45	
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg	50	55	60	
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly	65	70	75	
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro	80	85	90	
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg	95	100	105	
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu	110	115	120	
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val	125	130	135	
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe	140	145	150	
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val	155	160	165	
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala	170	175	180	
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe	185	190	195	
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala	200	205	210	
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr	215	220	225	
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly	230	235	240	
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu	245	250	255	
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile	260	265	270	
Val	Ser	Ala	Arg	Pro	Asp	Glu	Trp	Leu	Gly	Arg	Cys	Ile	Leu	Asp	275	280	285	

Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His Tyr
290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly Asp
305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp Pro
320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu Leu
335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile Gln
350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala Trp
365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe Glu
380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser Cys
395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg Ala
410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn Arg
425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val Asn
440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr Leu
455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg Pro
470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val Glu
485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr Val
500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly Phe
515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala Ala
530	535	540
Ala Ala Leu Thr	Leu Leu Leu Leu Tyr	Glu Pro Arg Gln Ala Gln
545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His Val
560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp Leu

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Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu		
	590		595		600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly		
	605		610		615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met		
	620		625		630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln		
	635		640		645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro		
	650		655		660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser		
	665		670		675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg		
	680		685		690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu		
	695		700		705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu		
	710		715		720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr		
	725		730		735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln		
	740		745		750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu		
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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

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<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe
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 <223> Synthetic oligonucleotide probe
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 atggctcagt gtgcagacag 20
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 <212> DNA
 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 330
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 <223> Synthetic oligonucleotide probe
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 atgcatggga aagaaggcct gccc 24
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<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

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			20					25						30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35					40						45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
			50					55						60

Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly	65	70	75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val	80	85	90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe	95	100	105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg	110	115	120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro	125	130	135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro	140	145	150

Glu Asp Glu

<210> 335
 <211> 442
 <212> DNA
 <213> Homo sapiens

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<400> 338
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<210> 339
<211> 2162
<212> DNA
<213> Homo sapiens

<400> 339
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tgcacctgtc attcacacaa ggcttttgga ggacccgata ctgggggcca 300
cccttcctgc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttgga ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
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ctactttctg cgctatgctg tgctgccgcy ggaggtggtc tgcaccgaaa 550
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cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttcatcacg 750
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actacatatc aggacgtcat cctaggcact cggaagacct atgccatcta 950
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ggccacctct atattgaggt gctcaataag caaaagtggc cgggtggctgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
ggcagcactg gccaaaggtga tgggggtgtgc tacacagtgt atgtcactgt 2100
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aaaaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Leu	Gly	Pro	Gly	Gly	
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Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	Leu	
				20					25					30	
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	Gln	
				35					40					45	
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	Ser	
				50					55					60	
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	Lys	
				65					70					75	
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	Trp	
				80					85					90	
Arg	Thr	Arg	Tyr	Trp	Gly	Pro	Pro	Phe	Leu	Gln	Ala	Pro	Ser	Gly	
				95					100					105	
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	Asp	
				110					115					120	
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	Cys	
				125					130					135	
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	Thr	
				140					145					150	
Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn	Asp	Thr	Asp	His	Tyr	
				155					160					165	
Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu	Val	Val	Cys	Thr	Glu	
				170					175					180	
Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys	Ser	Ser	Lys	Ala	
				185					190					195	
Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe	His	Thr	Ser	
				200					205					210	
Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg	Asn	Ala	
				215					220					225	
Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser	Val	
				230					235					240	
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser	
				245					250					255	
Leu	Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	
				260					265					270	

Ala Ser Glu Ser Arg Val Tyr Val Asp Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr Leu Glu Val His Pro Pro Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile Leu Gly Thr Arg Lys Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr Ala Met Ile Asn Asn Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp Lys Arg Pro Pro Glu Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His Ala Gln Arg Tyr Val Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu Ser Thr Leu Leu Tyr Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val Leu Leu Leu Asp Thr Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His Thr Leu Thr Ile Thr Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr Ile His Tyr Gln Pro Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu Glu Met Leu Ile Gln Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser Ile Gln Phe Glu Arg Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro Asp Pro Asn His Gly Phe Tyr Val Ser Pro Ser	455	460	465
Val Leu Ser Ala Leu Val Pro Ser Met Val Ala Ala Lys Pro Val	470	475	480
Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser Leu Phe Pro Val Ser	485	490	495
Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr Glu Pro Leu Leu	500	505	510
Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr Asn Val Ile	515	520	525
Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser Phe Tyr	530	535	540
Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr Gly	545	550	555
Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly			

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
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 tgaccctggg ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
 gtttgccag ctgacaacgt acgctgcttc aagtcgatc ctccccagtg 150
 tcacacagac caggactgtc tgggggaaag gaagtgttggt tacctgcact 200
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300

gtgtccaggc tctctctcta ccagggtgcc tcagaaatga tgctgggtcc 350
 tttctacctc tgggggtcac tctcacttgg cacctgcccc tgagggtcct 400
 gagacttggg atatggaaga agcaataccc aaccccacca aagaaaacct 450
 gagcttgaag tccttttccc caaaaagagg gaagagtcac aaaaagtcca 500
 gaccccgagg acggtacttt ccctctctac ctggtgctcc tccctaattg 550
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
 aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650
 gtcagagaag agaaactggg cctcaccaga tgctgaatct gctggtgcct 700
 tgatcttggg cttcccagcc tctagaactg taagaaataa atatttgctg 750
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<210> 345

<211> 111

<212> PRT

<213> Homo sapiens

<400> 345

Met	Gly	Ser	Ser	Ser	Phe	Leu	Val	Leu	Met	Val	Ser	Leu	Val	Leu	1	5	10	15
Val	Thr	Leu	Val	Ala	Val	Glu	Gly	Val	Lys	Glu	Gly	Ile	Glu	Lys	20	25	30	
Ala	Gly	Val	Cys	Pro	Ala	Asp	Asn	Val	Arg	Cys	Phe	Lys	Ser	Asp	35	40	45	
Pro	Pro	Gln	Cys	His	Thr	Asp	Gln	Asp	Cys	Leu	Gly	Glu	Arg	Lys	50	55	60	
Cys	Cys	Tyr	Leu	His	Cys	Gly	Phe	Lys	Cys	Val	Ile	Pro	Val	Lys	65	70	75	
Glu	Leu	Glu	Glu	Gly	Gly	Asn	Lys	Asp	Glu	Asp	Val	Ser	Arg	Pro	80	85	90	
Tyr	Pro	Glu	Pro	Gly	Trp	Glu	Ala	Lys	Cys	Pro	Gly	Ser	Ser	Ser	95	100	105	
Thr	Arg	Cys	Pro	Gln	Lys										110			

<210> 346

<211> 2528

<212> DNA

<213> Homo sapiens

<400> 346

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 gtctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggctct 200
 tgcttctggc tgtcctggc ttctttctct tcgcttgcc ctcttttatt 250
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 agaaaggtct ctacagtccc tggcaaagcc taagtcccag gcaccacaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaaccagcc caaggcccac accaccggag acagaggaaa 450
 ggaggccaac caggcaccgc cggaggagca ggacaaggtg cccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
 aactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
 ggcacaatca tggaagagcc aggacacaaa gacgaccacaa ggaaatggg 650
 gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
 ggcaaagcgg caaccacagc caagacgctc attcccaaaa gtcagcacag 750
 aatgtggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
 tgaccacagc agtcatcca cctaaggaga agaaacctca ggccaccca 850
 cccctgccc cttccagag cccacgacg cagagaaacc aaagactgaa 900
 ggccgccaac ttcaaactg agcctcgggtg ggattttgag gaaaaataca 950
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 aacactttgc accacccttt ggcttcatgg agctcaacta ctcttggtg 1150
 cagaaggtcg tgacagctt ccctccagtg cccagcagc agctgctct 1200
 ggccagcctc ccgctggga gcctccgggtg catcacctgt gccgtgggtg 1250
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 ggtctatact tgtccttgtc tttaagctat ttgacaactc tacgtgttgt 2450
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<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

Met	Arg	Ser	Cys	Leu	Trp	Arg	Cys	Arg	His	Leu	Ser	Gln	Gly	Val
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Gln	Trp	Ser	Leu	Leu	Leu	Ala	Val	Leu	Val	Phe	Phe	Leu	Phe	Ala
			20						25					30

Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
				35					40					45

Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

50										55					60				
Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile					
				65					70					75					
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr					
				80					85					90					
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn					
				95					100					105					
Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln					
				110					115					120					
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn					
				125					130					135					
Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg					
				140					145					150					
Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln					
				155					160					165					
Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val					
				170					175					180					
Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu					
				185					190					195					
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val					
				200					205					210					
Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro					
				215					220					225					
Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe					
				230					235					240					
Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn					
				245					250					255					
Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe					
				260					265					270					
Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile					
				275					280					285					
Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn					
				290					295					300					
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp					
				305					310					315					
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Phe	Gly	Phe	Met	Glu	Leu					
				320					325					330					
Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val					
				335					340					345					

Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu	350	355	360
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn	365	370	375
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe	380	385	390
Arg	Leu	Ser	Gly	Ala	Leu	Ile	Lys	Gly	Tyr	Glu	Gln	Asp	Val	Gly	395	400	405
Thr	Arg	Thr	Ser	Phe	Tyr	Gly	Phe	Thr	Ala	Phe	Ser	Leu	Thr	Gln	410	415	420
Ser	Leu	Leu	Ile	Leu	Gly	Asn	Arg	Gly	Phe	Lys	Asn	Val	Pro	Leu	425	430	435
Gly	Lys	Asp	Val	Arg	Tyr	Leu	His	Phe	Leu	Glu	Gly	Thr	Arg	Asp	440	445	450
Tyr	Glu	Trp	Leu	Glu	Ala	Leu	Leu	Met	Asn	Gln	Thr	Val	Met	Ser	455	460	465
Lys	Asn	Leu	Phe	Trp	Phe	Arg	His	Arg	Pro	Gln	Glu	Ala	Phe	Arg	47	475	480
Glu	Ala	Leu	His	Met	Asp	Arg	Tyr	Leu	Leu	Leu	His	Pro	Asp	Phe	485	490	495
Leu	Arg	Tyr	Met	Lys	Asn	Arg	Phe	Leu	Arg	Ser	Lys	Thr	Leu	Asp	500	505	510
Gly	Ala	His	Trp	Arg	Ile	Tyr	Arg	Pro	Thr	Thr	Gly	Ala	Leu	Leu	515	520	525
Leu	Leu	Thr	Ala	Leu	Gln	Leu	Cys	Asp	Gln	Val	Ser	Ala	Tyr	Gly	530	535	540
Phe	Ile	Thr	Glu	Gly	His	Glu	Arg	Phe	Ser	Asp	His	Tyr	Tyr	Asp	545	550	555
Thr	Ser	Trp	Lys	Arg	Leu	Ile	Phe	Tyr	Ile	Asn	His	Asp	Phe	Lys	560	565	570
Leu	Glu	Arg	Glu	Val	Trp	Lys	Arg	Leu	His	Asp	Glu	Gly	Ile	Ile	575	580	585
Arg	Leu	Tyr	Gln	Arg	Pro	Gly	Pro	Gly	Thr	Ala	Lys	Ala	Lys	Asn	590	595	600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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 gaaggacaag tttctaaaac accttacagg ccctctttat tttagtccaa 150
 agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200
 attcctgcat actataaaag atgcgccagg cttcttacct ggctggctgt 250
 cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300
 accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350
 ctttatacac atccccctcat ggacaagaga tttatttttg cagacagact 400
 cttccataag tcctttgagt tttgtatggt gttgacagtt tgcagatata 450
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<210> 349

<211> 91

<212> PRT

<213> Homo sapiens

<400> 349

Met	Arg	Gly	Pro	Gly	His	Pro	Leu	Leu	Leu	Gly	Leu	Leu	Leu	Val
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Leu	Gly	Pro	Ser	Pro	Glu	Gln	Arg	Val	Glu	Ile	Val	Pro	Arg	Asp
				20					25					30
Leu	Arg	Met	Lys	Asp	Lys	Phe	Leu	Lys	His	Leu	Thr	Gly	Pro	Leu
				35					40					45
Tyr	Phe	Ser	Pro	Lys	Cys	Ser	Lys	His	Phe	His	Arg	Leu	Tyr	His
				50					55					60
Asn	Thr	Arg	Asp	Cys	Thr	Ile	Pro	Ala	Tyr	Tyr	Lys	Arg	Cys	Ala
				65					70					75
Arg	Leu	Leu	Thr	Arg	Leu	Ala	Val	Ser	Pro	Val	Cys	Met	Glu	Asp
				80					85					90

Lys

<210> 350

<211> 1141

<212> DNA

<213> Homo sapiens

<400> 350

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<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

Met	Pro	Pro	Ala	Gly	Leu	Arg	Arg	Ala	Ala	Pro	Leu	Thr	Ala	Ile
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			20					25						30
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe
			35					40						45
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg
			50					55						60
Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln
			65					70						75

Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
 95 100 105
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
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 Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
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 Gly Ala

<210> 352
 <211> 3226
 <212> DNA
 <213> Homo sapiens

<400> 352
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 tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200
 caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250
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 ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650

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 ctgtgaagat gagcacctat ctgggtggcct tcatcatttc agattttgag 850
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<210> 353

<211> 941

<212> PRT

<213> Homo sapiens

<400> 353

Met	Val	Phe	Leu	Pro	Leu	Lys	Trp	Ser	Leu	Ala	Thr	Met	Ser	Phe
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Leu	Leu	Ser	Ser	Leu	Leu	Ala	Leu	Leu	Thr	Val	Ser	Thr	Pro	Ser
				20					25					30

Trp	Cys	Gln	Ser	Thr	Glu	Ala	Ser	Pro	Lys	Arg	Ser	Asp	Gly	Thr		35	40	45
Pro	Phe	Pro	Trp	Asn	Lys	Ile	Arg	Leu	Pro	Glu	Tyr	Val	Ile	Pro		50	55	60
Val	His	Tyr	Asp	Leu	Leu	Ile	His	Ala	Asn	Leu	Thr	Thr	Leu	Thr		65	70	75
Phe	Trp	Gly	Thr	Thr	Lys	Val	Glu	Ile	Thr	Ala	Ser	Gln	Pro	Thr		80	85	90
Ser	Thr	Ile	Ile	Leu	His	Ser	His	His	Leu	Gln	Ile	Ser	Arg	Ala		95	100	105
Thr	Leu	Arg	Lys	Gly	Ala	Gly	Glu	Arg	Leu	Ser	Glu	Glu	Pro	Leu		110	115	120
Gln	Val	Leu	Glu	His	Pro	Pro	Gln	Glu	Gln	Ile	Ala	Leu	Leu	Ala		125	130	135
Pro	Glu	Pro	Leu	Leu	Val	Gly	Leu	Pro	Tyr	Thr	Val	Val	Ile	His		140	145	150
Tyr	Ala	Gly	Asn	Leu	Ser	Glu	Thr	Phe	His	Gly	Phe	Tyr	Lys	Ser		155	160	165
Thr	Tyr	Arg	Thr	Lys	Glu	Gly	Glu	Leu	Arg	Ile	Leu	Ala	Ser	Thr		170	175	180
Gln	Phe	Glu	Pro	Thr	Ala	Ala	Arg	Met	Ala	Phe	Pro	Cys	Phe	Asp		185	190	195
Glu	Pro	Ala	Phe	Lys	Ala	Ser	Phe	Ser	Ile	Lys	Ile	Arg	Arg	Glu		200	205	210
Pro	Arg	His	Leu	Ala	Ile	Ser	Asn	Met	Pro	Leu	Val	Lys	Ser	Val		215	220	225
Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val		230	235	240
Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	Ile	Ser	Asp	Phe	Glu		245	250	255
Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	Lys	Val	Ser	Val	Tyr		260	265	270
Ala	Val	Pro	Asp	Lys	Ile	Asn	Gln	Ala	Asp	Tyr	Ala	Leu	Asp	Ala		275	280	285
Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	Tyr	Phe	Ser	Ile	Pro		290	295	300
Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	Ile	Pro	Asp	Phe	Gln		305	310	315
Ser	Gly	Ala	Met	Glu	Asn	Trp	Gly	Leu	Thr	Thr	Tyr	Arg	Glu	Ser				

	320		325		330
Ala Leu Leu Phe	Asp 335	Ala Glu Lys Ser	Ser 340	Ala Ser Ser Lys	Leu 345
Gly Ile Thr Val	Thr 350	Val Ala His Glu	Leu 355	Ala His Gln Trp	Phe 360
Gly Asn Leu Val	Thr 365	Met Glu Trp Trp	Asn 370	Asp Leu Trp Leu	Asn 375
Glu Gly Phe Ala	Lys 380	Phe Met Glu Phe	Val 385	Ser Val Ser Val	Thr 390
His Pro Glu Leu	Lys 395	Val Gly Asp Tyr	Phe 400	Phe Gly Lys Cys	Phe 405
Asp Ala Met Glu	Val 410	Asp Ala Leu Asn	Ser 415	Ser His Pro Val	Ser 420
Thr Pro Val Glu	Asn 425	Pro Ala Gln Ile	Arg 430	Glu Met Phe Asp	Asp 435
Val Ser Tyr Asp	Lys 440	Gly Ala Cys Ile	Leu 445	Asn Met Leu Arg	Glu 450
Tyr Leu Ser Ala	Asp 455	Ala Phe Lys Ser	Gly 460	Ile Val Gln Tyr	Leu 465
Gln Lys His Ser	Tyr 470	Lys Asn Thr Lys	Asn 475	Glu Asp Leu Trp	Asp 480
Ser Met Ala Ser	Ile 485	Cys Pro Thr Asp	Gly 490	Val Lys Gly Met	Asp 495
Gly Phe Cys Ser	Arg 500	Ser Gln His Ser	Ser 505	Ser Ser Ser His	Trp 510
His Gln Glu Gly	Val 515	Asp Val Lys Thr	Met 520	Met Asn Thr Trp	Thr 525
Leu Gln Arg Gly	Phe 530	Pro Leu Ile Thr	Ile 535	Thr Val Arg Gly	Arg 540
Asn Val His Met	Lys 545	Gln Glu His Tyr	Met 550	Lys Gly Ser Asp	Gly 555
Ala Pro Asp Thr	Gly 560	Tyr Leu Trp His	Val 565	Pro Leu Thr Phe	Ile 570
Thr Ser Lys Ser	Asn 575	Met Val His Arg	Phe 580	Leu Leu Lys Thr	Lys 585
Thr Asp Val Leu	Ile 590	Leu Pro Glu Glu	Val 595	Glu Trp Ile Lys	Phe 600
Asn Val Gly Met	Asn 605	Gly Tyr Tyr Ile	Val 610	His Tyr Glu Asp	Asp 615

Gly	Trp	Asp	Ser	Leu	Thr	Gly	Leu	Leu	Lys	Gly	Thr	His	Thr	Ala
				620					625					630
Val	Ser	Ser	Asn	Asp	Arg	Ala	Ser	Leu	Ile	Asn	Asn	Ala	Phe	Gln
				635					640					645
Leu	Val	Ser	Ile	Gly	Lys	Leu	Ser	Ile	Glu	Lys	Ala	Leu	Asp	Leu
				650					655					660
Ser	Leu	Tyr	Leu	Lys	His	Glu	Thr	Glu	Ile	Met	Pro	Val	Phe	Gln
				665					670					675
Gly	Leu	Asn	Glu	Leu	Ile	Pro	Met	Tyr	Lys	Leu	Met	Glu	Lys	Arg
				680					685					690
Asp	Met	Asn	Glu	Val	Glu	Thr	Gln	Phe	Lys	Ala	Phe	Leu	Ile	Arg
				695					700					705
Leu	Leu	Arg	Asp	Leu	Ile	Asp	Lys	Gln	Thr	Trp	Thr	Asp	Glu	Gly
				710					715					720
Ser	Val	Ser	Glu	Gln	Met	Leu	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Ala
				725					730					735
Cys	Val	His	Asn	Tyr	Gln	Pro	Cys	Val	Gln	Arg	Ala	Glu	Gly	Tyr
				740					745					750
Phe	Arg	Lys	Trp	Lys	Glu	Ser	Asn	Gly	Asn	Leu	Ser	Leu	Pro	Val
				755					760					765
Asp	Val	Thr	Leu	Ala	Val	Phe	Ala	Val	Gly	Ala	Gln	Ser	Thr	Glu
				770					775					780
Gly	Trp	Asp	Phe	Leu	Tyr	Ser	Lys	Tyr	Gln	Phe	Ser	Leu	Ser	Ser
				785					790					795
Thr	Glu	Lys	Ser	Gln	Ile	Glu	Phe	Ala	Leu	Cys	Arg	Thr	Gln	Asn
				800					805					810
Lys	Glu	Lys	Leu	Gln	Trp	Leu	Leu	Asp	Glu	Ser	Phe	Lys	Gly	Asp
				815					820					825
Lys	Ile	Lys	Thr	Gln	Glu	Phe	Pro	Gln	Ile	Leu	Thr	Leu	Ile	Gly
				830					835					840
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys
				845					850					855
Asn	Trp	Asn	Lys	Leu	Val	Gln	Lys	Phe	Glu	Leu	Gly	Ser	Ser	Ser
				860					865					870
Ile	Ala	His	Met	Val	Met	Gly	Thr	Thr	Asn	Gln	Phe	Ser	Thr	Arg
				875					880					885
Thr	Arg	Leu	Glu	Glu	Val	Lys	Gly	Phe	Phe	Ser	Ser	Leu	Lys	Glu
				890					895					900
Asn	Gly	Ser	Gln	Leu	Arg	Cys	Val	Gln	Gln	Thr	Ile	Glu	Thr	Ile

	905		910		915
Glu Glu Asn Ile Gly Trp Met Asp Lys Asn Phe Asp Lys Ile Arg					
	920		925		930
Val Trp Leu Gln Ser Glu Lys Leu Glu Arg Met					
	935		940		

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 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
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 gaacaccagc tgcgacagcg gcttgggggtg ccaggacacg ttgatgctca 200
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<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

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Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
				20					25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
				35					40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
				50					55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
				65					70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
				80					85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
				95					100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
				110					115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
				125					130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
				140					145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu
				155					160					165

Arg Gly Gly Gly	Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met
170	175	180
Pro Gln Pro Gly	Cys Asn Leu Leu Asn Gly Thr Gln Glu Ile Gly	
185	190	195
Pro Val Gly Met	Thr Glu Asn Cys Asn Arg Lys Asp Phe Leu Thr	
200	205	210
Cys His Arg Gly	Thr Thr Ile Met Thr His Gly Asn Leu Ala Gln	
215	220	225
Glu Pro Thr Asp	Trp Thr Thr Ser Asn Thr Glu Met Cys Glu Val	
230	235	240
Gly Gln Val Cys	Gln Glu Thr Leu Leu Leu Ile Asp Val Gly Leu	
245	250	255
Thr Ser Thr Leu	Val Gly Thr Lys Gly Cys Ser Thr Val Gly Ala	
260	265	270
Gln Asn Ser Gln	Lys Thr Thr Ile His Ser Ala Pro Pro Gly Val	
275	280	285
Leu Val Ala Ser	Tyr Thr His Phe Cys Ser Ser Asp Leu Cys Asn	
290	295	300
Ser Ala Ser Ser	Ser Ser Val Leu Leu Asn Ser Leu Pro Pro Gln	
305	310	315
Ala Ala Pro Val	Pro Gly Asp Arg Gln Cys Pro Thr Cys Val Gln	
320	325	330
Pro Leu Gly Thr	Cys Ser Ser Gly Ser Pro Arg Met Thr Cys Pro	
335	340	345
Arg Gly Ala Thr	His Cys Tyr Asp Gly Tyr Ile His Leu Ser Gly	
350	355	360
Gly Gly Leu Ser	Thr Lys Met Ser Ile Gln Gly Cys Val Ala Gln	
365	370	375
Pro Ser Ser Phe	Leu Leu Asn His Thr Arg Gln Ile Gly Ile Phe	
380	385	390
Ser Ala Arg Glu	Lys Arg Asp Val Gln Pro Pro Ala Ser Gln His	
395	400	405
Glu Gly Gly Gly	Ala Glu Gly Leu Glu Ser Leu Thr Trp Gly Val	
410	415	420
Gly Leu Ala Leu	Ala Pro Ala Leu Trp Trp Gly Val Val Cys Pro	
425	430	435

Ser Cys

<210> 356

<211> 1238
<212> DNA
<213> Homo sapiens

<400> 356
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<210> 357
<211> 271
<212> PRT

<213> Homo sapiens

<400> 357

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Phe	Leu	Ser	Leu	Leu	Pro	Ser	Gly	His	Pro	Gln	Pro	Ala	Gly	Asp	
				20					25					30	
Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
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Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
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Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
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Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
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Met

<210> 358
 <211> 972
 <212> DNA
 <213> Homo sapiens

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<210> 359
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 359
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 20 25 30

Val	Pro	Gly	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln
				35					40					45
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
				50					55					60
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
				65					70					75
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
				80					85					90
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
				95					100					105
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
				110					115					120
Ser	Thr	Gly	Lys	Ser	Ser	Leu	Gly	Thr	Glu	Glu	Gln	Arg	Pro	Leu
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<210> 360

<211> 1738

<212> DNA

<213> Homo sapiens

<400> 360

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<210> 361

<211> 159

<212> PRT

<213> Homo sapiens

<400> 361

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Leu	Val	Cys	Gly	Ser	Gln	Gly	Tyr	Leu	Leu	Pro	Asn	Val	Thr	Leu
				20					25					30
Leu	Glu	Glu	Leu	Leu	Ser	Lys	Tyr	Gln	His	Asn	Glu	Ser	His	Ser
				35					40					45
Arg	Val	Arg	Arg	Ala	Ile	Pro	Arg	Glu	Asp	Lys	Glu	Glu	Ile	Leu
				50					55					60
Met	Leu	His	Asn	Lys	Leu	Arg	Gly	Gln	Val	Gln	Pro	Gln	Ala	Ser
				65					70					75

Asn	Met	Glu	Tyr	Met	Val	Ser	Ala	Gly	Ser	Gly	Arg	Arg	Gly	Trp
				80					85					90
His	Arg	Gly	Trp	Gly	Leu	Gly	His	Gln	Pro	Ala	Leu	Phe	Pro	Ser
				95					100					105
Gln	Leu	Cys	Ser	Pro	Ala	Ser	Ala	Cys	Asp	Gly	Trp	Leu	Arg	Val
				110					115					120
Ser	Ser	Gly	Arg	Gly	Gly	Ser	Arg	Leu	Cys	Ser	Val	Leu	Phe	Val
				125					130					135
Cys	Phe	Glu	Thr	Gly	Ser	His	Ser	Ala	Thr	Asp	Ala	Gly	Val	Gln
				140					145					150
Trp	His	Asn	Arg	His	Ala	Leu	Lys	Pro						
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<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
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<210> 363
 <211> 78
 <212> PRT
 <213> Homo sapiens

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Ser	Ser	His	Gly	Thr	Gly	Pro	Gly	Met	Thr	Leu	Gln	Leu	Lys	Leu
				20				25						30
Lys	Glu	Ser	Phe	Leu	Thr	Asn	Ser	Ser	Tyr	Glu	Ser	Ser	Phe	Leu
				35				40						45
Glu	Leu	Leu	Glu	Lys	Leu	Cys	Leu	Leu	Leu	His	Leu	Pro	Ser	Gly

	50		55		60									
Thr	Ser	Val	Thr	Leu	His	His	Ala	Arg	Ser	Gln	His	His	Val	Val
				65					70					75

Cys Asn Thr

<210> 364
 <211> 826
 <212> DNA
 <213> Homo sapiens

<400> 364
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 ttctgatgtg ggggttcctcc actgtgttct gtgtgctatt aatatttacc 200
 attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250
 cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
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<210> 365
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 365
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Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
                35                40                45
Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
                50                55                60
Leu Pro Ser Asp Cys Ser Lys
                65

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<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
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 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
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 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210
 Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu
 215 220 225
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn
 230 235 240
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly
 245 250 255
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile

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275	280	285
Pro Gly Thr His	Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly	
290	295	300
Thr Leu Gly Val	Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln	
305	310	315
Asp Ala Glu Ala	Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val	
320	325	330
Tyr Ser Thr Gly	Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr	
335	340	345
Asp Pro Leu Gly	Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe	
350	355	360
Phe Pro Lys Arg	Pro Arg Ser His Ser Met Ile His Tyr Asn Pro	
365	370	375
Arg Asp Lys Gln	Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile	
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<210> 368

<211> 2281

<212> DNA

<213> Homo sapiens

<400> 368

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gtcatgaaag tggtaaaagt gggaaccagt gtgctttgaa accaaattag 2050

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
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 cctctttttca gttcatcaag ttcatacagat atttgagtgc ccactctgtg 2200
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369
 <211> 447
 <212> PRT
 <213> Homo sapiens

<400> 369
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 20 25 30
 Trp Leu Arg Ala Gly Glu Glu Arg Ser Gly Arg Pro Ala Cys Gln
 35 40 45
 Lys Ala Asn Gly Phe Pro Pro Asp Lys Ser Ser Gly Ser Lys Lys
 50 55 60
 Gln Lys Gln Tyr Gln Arg Ile Arg Lys Glu Lys Pro Gln Gln His
 65 70 75
 Asn Phe Thr His Arg Leu Leu Ala Ala Ala Leu Lys Ser His Ser
 80 85 90
 Gly Asn Ile Ser Cys Met Asp Phe Ser Ser Asn Gly Lys Tyr Leu
 95 100 105
 Ala Thr Cys Ala Asp Asp Arg Thr Ile Arg Ile Trp Ser Thr Lys
 110 115 120
 Asp Phe Leu Gln Arg Glu His Arg Ser Met Arg Ala Asn Val Glu
 125 130 135
 Leu Asp His Ala Thr Leu Val Arg Phe Ser Pro Asp Cys Arg Ala
 140 145 150
 Phe Ile Val Trp Leu Ala Asn Gly Asp Thr Leu Arg Val Phe Lys
 155 160 165
 Met Thr Lys Arg Glu Asp Gly Gly Tyr Thr Phe Thr Ala Thr Pro
 170 175 180
 Glu Asp Phe Pro Lys Lys His Lys Ala Pro Val Ile Asp Ile Gly
 185 190 195
 Ile Ala Asn Thr Gly Lys Phe Ile Met Thr Ala Ser Ser Asp Thr
 200 205 210

Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile	215	220	225
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys	230	235	240
Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370

<211> 1415

<212> DNA

<213> Homo sapiens

<400> 370

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 aggaaacgca agcaccacac ctgtccttgc ttgcccacc tgctgtgctc 350
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 attttttaggc gcttgccctgg tctcaggata cccaccatcc ttttctgag 450
 cacagcctgg atttttatct ctgccatgaa acccagctcc catgactctc 500
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 ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
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<210> 371

<211> 105

<212> PRT

<213> Homo sapiens

<400> 371

Met	Arg	Gly	Ala	Thr	Arg	Val	Ser	Ile	Met	Leu	Leu	Leu	Val	Thr
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Val	Ser	Asp	Cys	Ala	Val	Ile	Thr	Gly	Ala	Cys	Glu	Arg	Asp	Val
				20					25					30
Gln	Cys	Gly	Ala	Gly	Thr	Cys	Cys	Ala	Ile	Ser	Leu	Trp	Leu	Arg
				35					40					45
Gly	Leu	Arg	Met	Cys	Thr	Pro	Leu	Gly	Arg	Glu	Gly	Glu	Glu	Cys
				50					55					60
His	Pro	Gly	Ser	His	Lys	Val	Pro	Phe	Phe	Arg	Lys	Arg	Lys	His
				65					70					75
His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200
gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
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agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400
catcaggact gaagtgaagg atttcagcc ttatttcaaa ggagaaatct 450
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tttatgggat ttatccgtct gggagtgtgg tacaacttct tccgagcctg 550
gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
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taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750

aaactgccca gctcagggat aaccagggac attcacctgt gttcatggga 800
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 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373

<211> 229

<212> PRT

<213> Homo sapiens

<400> 373

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Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25				30	
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40				45	
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55				60	
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70				75	
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85				90	
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100				105	
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115				120	
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130				135	
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145				150	

Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
				215					220					225

Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374
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 gcggtaggag gggcgagcgc gagaagcccc ttctctggcg ctgccaaccc 150
 gccaccagc ccatggcgaa ccccggtctg gggctgcttc tggcgctggg 200
 cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
 ccacttctgc aaatgagaat agcactgttt tgccttcac caccagctcc 300
 agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtggt 350
 cttctccctc ttggctgcct tgctcctggc tgtggggctg gcactgttgg 400
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 gggcagtcag atccaccag tgcttaatag cagggaagaa ggtacttcaa 650
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 tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 375

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Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr
				20					25					30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser
				35					40					45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile
				50					55					60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly
				65					70					75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu
				80					85					90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala
				95					100					105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys
				110					115					120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376

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tttctgtcac tattattatt gttggtatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaatggcta ctttctatca agaaataaag 200
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga gggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatataca ataaggtgaa 450
attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600

ttacagaatt gacatttttaa atgcgataca gttagaatag gaaatatgac 650
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 aaggaaaaaa aaa 713
 <210> 377
 <211> 90
 <212> PRT
 <213> Homo sapiens
 <400> 377
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 20 25 30
 Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
 35 40 45
 Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
 50 55 60
 Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
 65 70 75
 Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
 80 85 90
 <210> 378
 <211> 3265
 <212> DNA
 <213> Homo sapiens
 <400> 378
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 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
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<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp	35	40	45	
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser	50	55	60	
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn	65	70	75	
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr	80	85	90	
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val	95	100	105	
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln	110	115	120	
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro	125	130	135	
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly	140	145	150	
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	155	160	165	
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys	170	175	180	
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn	185	190	195	
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys	200	205	210	
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe	215	220	225	
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met	230	235	240	
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His	245	250	255	
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg	260	265	270	
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr	275	280	285	
Ile	Pro	Met	Val	Thr	Pro	Pro	Pro	Pro	Pro	Val	Phe	Ser	Leu	Leu				

290										295					300				
Lys	Ile	Ser	Gln	Arg	Ile	Val	Cys	Leu	Val	Leu	Asp	Lys	Ser	Gly					
				305					310					315					
Ser	Met	Gly	Gly	Lys	Asp	Arg	Leu	Asn	Arg	Met	Asn	Gln	Ala	Ala					
				320					325					330					
Lys	His	Phe	Leu	Leu	Gln	Thr	Val	Glu	Asn	Gly	Ser	Trp	Val	Gly					
				335					340					345					
Met	Val	His	Phe	Asp	Ser	Thr	Ala	Thr	Ile	Val	Asn	Lys	Leu	Ile					
				350					355					360					
Gln	Ile	Lys	Ser	Ser	Asp	Glu	Arg	Asn	Thr	Leu	Met	Ala	Gly	Leu					
				365					370					375					
Pro	Thr	Tyr	Pro	Leu	Gly	Gly	Thr	Ser	Ile	Cys	Ser	Gly	Ile	Lys					
				380					385					390					
Tyr	Ala	Phe	Gln	Val	Ile	Gly	Glu	Leu	His	Ser	Gln	Leu	Asp	Gly					
				395					400					405					
Ser	Glu	Val	Leu	Leu	Leu	Thr	Asp	Gly	Glu	Asp	Asn	Thr	Ala	Ser					
				410					415					420					
Ser	Cys	Ile	Asp	Glu	Val	Lys	Gln	Ser	Gly	Ala	Ile	Val	His	Phe					
				425					430					435					
Ile	Ala	Leu	Gly	Arg	Ala	Ala	Asp	Glu	Ala	Val	Ile	Glu	Met	Ser					
				440					445					450					
Lys	Ile	Thr	Gly	Gly	Ser	His	Phe	Tyr	Val	Ser	Asp	Glu	Ala	Gln					
				455					460					465					
Asn	Asn	Gly	Leu	Ile	Asp	Ala	Phe	Gly	Ala	Leu	Thr	Ser	Gly	Asn					
				470					475					480					
Thr	Asp	Leu	Ser	Gln	Lys	Ser	Leu	Gln	Leu	Glu	Ser	Lys	Gly	Leu					
				485					490					495					
Thr	Leu	Asn	Ser	Asn	Ala	Trp	Met	Asn	Asp	Thr	Val	Ile	Ile	Asp					
				500					505					510					
Ser	Thr	Val	Gly	Lys	Asp	Thr	Phe	Phe	Leu	Ile	Thr	Trp	Asn	Ser					
				515					520					525					
Leu	Pro	Pro	Ser	Ile	Ser	Leu	Trp	Asp	Pro	Ser	Gly	Thr	Ile	Met					
				530					535					540					
Glu	Asn	Phe	Thr	Val	Asp	Ala	Thr	Ser	Lys	Met	Ala	Tyr	Leu	Ser					
				545					550					555					
Ile	Pro	Gly	Thr	Ala	Lys	Val	Gly	Thr	Trp	Ala	Tyr	Asn	Leu	Gln					
				560					565					570					
Ala	Lys	Ala	Asn	Pro	Glu	Thr	Leu	Thr	Ile	Thr	Val	Thr	Ser	Arg					
				575					580					585					

Ala	Ala	Asn	Ser	Ser	Val	Pro	Pro	Ile	Thr	Val	Asn	Ala	Lys	Met	590	595	600
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala	605	610	615
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr	620	625	630
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu	635	640	645
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val	650	655	660
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser	665	670	675
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys	680	685	690
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val	695	700	705
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp	710	715	720
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser	725	730	735
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro	740	745	750
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val	755	760	765
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn	770	775	780
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala	785	790	795
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val	800	805	810
Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser	815	820	825
Phe	Ala	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Glu	Glu	Asn	Ala	Thr	His	830	835	840
Ile	Phe	Ile	Ala	Ile	Lys	Ser	Ile	Asp	Lys	Ser	Asn	Leu	Thr	Ser	845	850	855
Lys	Val	Ser	Asn	Ile	Ala	Gln	Val	Thr	Leu	Phe	Ile	Pro	Gln	Ala	860	865	870
Asn	Pro	Asp	Asp	Ile	Asp	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro			

	875		880		885
Thr Pro Asp Lys Ser His Asn Ser Gly Val Asn Ile Ser Thr Leu					
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Val Leu Ser Val Ile Gly Ser Val Val Ile Val Asn Phe Ile Leu					
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Ser Thr Thr Ile					

<210> 380
 <211> 3877
 <212> DNA
 <213> Homo sapiens

<400> 380
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 gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200
 cccagttat gccaggattt actagagagt gtcaactcaa ccagcagcg 250
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 aaggaaaggt cccctcttgc tgttggtgc acatcaggaa ggctgtgatg 400
 ggaatgaagg tgaaaacttg gagatttcac ttcagtcatt gcttctgcct 450
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 ccaagaggca gaactcgttc tagaaggaaa tggatgcaag cagctccggg 550
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 tggttttgct ggtgtcctc tgctgtgcta tctctgtcct gtacatgttg 750
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 cccaggccga cctcctggcc ttcctgcact cgcaggtgga caaggcagag 1050

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 caatcacctg ccttacacgg cctctgattt catagaaggg atctaccgaa 1300
 cagaaagggg caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350
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<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

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Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr	
				20					25					30	
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu	
				35					40					45	
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val	
				50					55					60	
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu	
				65					70					75	
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser	
				80					85					90	
Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	

Lys Arg Val Asp	Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu	275	280	285
Met Cys Ile Glu	Gln Asp Gly Arg Val His Leu Thr Val Val Tyr	290	295	300
Phe Gly Lys Glu	Glu Ile Asn Glu Val Lys Gly Ile Leu Glu Asn	305	310	315
Thr Ser Lys Ala	Ala Asn Phe Arg Asn Phe Thr Phe Ile Gln Leu	320	325	330
Asn Gly Glu Phe	Ser Arg Gly Lys Gly Leu Asp Val Gly Ala Arg	335	340	345
Phe Trp Lys Gly	Ser Asn Val Leu Leu Phe Phe Cys Asp Val Asp	350	355	360
Ile Tyr Phe Thr	Ser Glu Phe Leu Asn Thr Cys Arg Leu Asn Thr	365	370	375
Gln Pro Gly Lys	Lys Val Phe Tyr Pro Val Leu Phe Ser Gln Tyr	380	385	390
Asn Pro Gly Ile	Ile Tyr Gly His His Asp Ala Val Pro Pro Leu	395	400	405
Glu Gln Gln Leu	Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp	410	415	420
Phe Gly Phe Gly	Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn	425	430	435
Ile Gly Gly Phe	Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp	440	445	450
Val His Leu Tyr	Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val	455	460	465
Arg Thr Pro Val	Arg Gly Leu Phe His Leu Trp His Glu Lys Arg	470	475	480
Cys Met Asp Glu	Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln	485	490	495
Ser Lys Ala Met	Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu	500	505	510
Val Phe Arg His	Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln	515	520	525
Lys Thr Ser Ser	Lys Lys Thr	530		

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 382
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 <210> 383
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 383
 gcgaaggtga gcctctatct cgtgcc 26

 <210> 384
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 384
 cagcctacac gtattgagg 19

 <210> 385
 <211> 48
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 385
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 <210> 386
 <211> 1346
 <212> DNA
 <213> Homo sapiens

 <400> 386
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 ctcttcaaag cgatggtagc tttctccatg agaaaagttc ccaacagaga 200
 agcaacagaa atttcccatg toctactttg caatgtaacc cagaggggtat 250
 cattctgggtt tgtggttaca gacccttcaa aaaatcacac ccttctgct 300
 gttgagggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350

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<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

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Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser
				20					25					30
Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn
				35					40					45
Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys
				50					55					60

Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys	65	70	75
Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro	80	85	90
Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile	95	100	105
Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp	110	115	120
Gln	Thr	Leu	Glu	Phe	Leu	Lys	Ile	Pro	Ser	Thr	Leu	Ala	Pro	Pro	125	130	135
Met	Asp	Pro	Ser	Val	Pro	Ile	Trp	Ile	Ile	Ile	Phe	Gly	Val	Ile	140	145	150
Phe	Cys	Ile	Ile	Ile	Val	Ala	Ile	Ala	Leu	Leu	Ile	Leu	Ser	Gly	155	160	165
Ile	Trp	Gln	Arg	Arg	Arg	Lys	Asn	Lys	Glu	Pro	Ser	Glu	Val	Asp	170	175	180
Asp	Ala	Glu	Asp	Lys	Cys	Glu	Asn	Met	Ile	Thr	Ile	Glu	Asn	Gly	185	190	195
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Pro Ser

<210> 388
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 388
 aactcaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccgagat 50
 ggcccttgga ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100
 gccaaaggctg gggttccctc atgtatggca agagctctac tcgtgcgggtg 150
 cttctctctc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggtg tgctggaggc tgttaatggg acagatgctc 250
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300
 gtgacctgga attttcgctc tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaacccat gagtgggagg ttttaaggacc 400
 ggggtgtcttg ggaatgggaat cctgagcggg acgatgcctc catccttctc 450
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500

cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
 aactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600
 gctgtgcac tgatgatcat aatagtaatt gtagtgggtcc tcttccagca 650
 ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
 aatcaaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750
 ttagaagaca cagactaaca attttagatg gaagctgaga tgatttccaa 800
 gaacaagaac cctagtattt cttgaagtta atggaaactt ttctttggct 850
 tttccagttg tgaccctgtt tccaaccagt tctgcagcat attagattct 900
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950
 gtcatacaca gcctcattat taaggcttta ttttaatttca gagtgtaaat 1000
 tttttcaagt gctcattagg ttttataaac aagaagctac atttttgccc 1050
 ttaagacact acttacagtg ttatgacttg tatacacata tattgggtatc 1100
 aaaggggata aaagccaatt tgtctgttac atttcctttc acgtatttct 1150
 tttagcagca cttctgctac taaagttaat gtgtttactc tctttccttc 1200
 ccacattctc aattaaagg tgagctaagc ctcctcgggtg tttctgatta 1250
 acagtaaadc ctaaattcaa actgttaaact gacattttta tttttatgtc 1300
 tctccttaac tatgagacac atcttgtttt actgaatttc tttcaatatt 1350
 ccaggtgata gattttttgtc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met	Tyr	Gly	Lys	Ser	Ser	Thr	Arg	Ala	Val	Leu	Leu	Leu	Leu	Gly
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Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr
				20					25					30
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu
				35					40					45
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr
				50					55					60
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe
				65					70					75
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg

	80	85	90
Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp	95	100	105
Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr	110	115	120
Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile	125	130	135
Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu	140	145	150
Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met	155	160	165
Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys	170	175	180
Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser	185	190	195
Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr	200	205	210
Leu Glu Asp Thr Asp	215		

<210> 390
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 390
 ccgaggccat ctagaggcca gagc 24

<210> 391
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 391
 acaggcagag ccaatggcca gagc 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
<211> 471
<212> DNA
<213> Homo sapiens

<400> 393
gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
agcagtcctg gtactcttgg gagtttccat ctttctggtc tctgccaga 100
atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
gatgatgaag cccctgatgc tgaaaccact gctgctgcaa cactgcgac 200
cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
tattcatgct tcctgtgatt tcattcaact acttaccttg cctacgatat 400
cccccttata tctaatacgt ttaatttctt tcaaataaaa aataactatg 450
agcaacataa aaaaaaaaaa a 471

<210> 394
<211> 90
<212> PRT
<213> Homo sapiens

<400> 394
Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
1 5 10 15
Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
20 25 30
Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
35 40 45
Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
50 55 60
Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
65 70 75
Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
80 85 90

<210> 395
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 395
 gctccctgat cttcatgtca ccacc 25

 <210> 396
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 396
 caggacaca ctctaccatt cgggag 26

 <210> 397
 <211> 42
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 397
 ccattcttct ggtctctgcc cagaatccga caacagctgc tc 42

 <210> 398
 <211> 907
 <212> DNA
 <213> Homo sapiens

 <400> 398
 ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtgggtcc 50
 aaccttggac ccctaggggt ctggatttgc tggtaacaa gataacctga 100
 gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
 gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
 ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250
 ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300
 gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350
 ggccagtcca ggggtggggg cggcaaactc cataaagaac cagaggggtct 400
 gggccccggc cacagagtca tctgccagc tcctctgctg ctggccagtg 450
 ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500
 gcctgcgggc catggtccct gtctagggca gcaattctca accttcttgc 550
 tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600

agcaattaaa actgagaaat gggccgggca cgggtggctca cgctgtaat 650
 cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tgggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccagg aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
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 ccggcctgcc tcagcgccc ccatgggcgg ccagaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200

cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300
atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
gggggaggtg gcccaggcac agaaggtgct acgggacagc gtgcagcggc 400
tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450
gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggacct 500
cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
cgccccgtga ggccccctgtg caggaggagg ctgcctgttc actgggatca 700
gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750
cggggacaaa ggagaggat gtagcccat tggggagggg tggaggaagg 800
acatgtaccc tttcatgctt acacaccct cattaaagca gagtcgtggc 850
atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
<211> 198
<212> PRT
<213> Homo sapiens

<400> 401
Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
1 5 10 15
Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
20 25 30
Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
35 40 45
Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
50 55 60
Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
65 70 75
Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
80 85 90
Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
95 100 105
Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
110 115 120

Gln	Ala	Gln	Lys	Val	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu	Val
				125					130					135
Gln	Leu	Arg	Ser	Ala	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe	Glu
				140					145					150
Val	Leu	Lys	Ala	His	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp	Ala
				155					160					165
Leu	Thr	Gly	His	Val	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala	Gln
				170					175					180
Gln	His	Arg	Leu	Arg	Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala	Ala
				185					190					195

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
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 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
 tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
 aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg cctccaaga ctatggtaaa aggagcctgc 400
 caggtgtcaa tgacttttgg ctgggcatca atgacatggc cacggaaggc 450
 aagtttggtg acgtcaacgg aatcgctatc tccttcctca actgggaccg 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt ttactttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
 tgccttcctt ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850

gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900
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gaagtttagc gtatgtttga ctaacaaaaa ttcctacat cagagactct 1050
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tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250
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accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400
aaaagaacct acattttatt tgcttttagc tccttactct caccttttat 1450
gagattgaga gtggacttac atttcctttt ttacattttc gtatatattat 1500
tttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550
tggaagctga aaactgaatt taaagaatgc tatcttgga aattgcatac 1600
gtctgtgcaa ttttttattc tgcttagtgc tattctgctt gttaactag 1650
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tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750
cttcaaataa atagtgttta aacattgaat gtgttttgtg aacaatatcc 1800
cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
aaaaaaaaa aaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu
1				5					10					15
Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Leu	Asp	Gln	Thr	Thr
				20					25					30
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg
				35					40					45

Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu	50	55	60
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr	65	70	75
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala	80	85	90
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile	95	100	105
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile	110	115	120
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn	125	130	135
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe	140	145	150
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg	155	160	165
Ala	Gln	Pro	Asn	Gly	Gly	Lys	Arg	Glu	Asn	Cys	Val	Leu	Phe	Ser	170	175	180
Gln	Ser	Ala	Gln	Gly	Lys	Trp	Ser	Asp	Glu	Ala	Cys	Arg	Ser	Ser	185	190	195
Lys	Arg	Tyr	Ile	Cys	Glu	Phe	Thr	Ile	Pro	Lys					200	205	

<210> 404

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 404

cctggttatc cccaggaact ccgac 25

<210> 405

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 405

ctcttgctgc tgcgacaggc ctc 23

<210> 406

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 406

cgccctccaa gactatggtg aaaggagcct gccaggtgtc aatgac 46

<210> 407

<211> 570

<212> DNA

<213> Homo sapiens

<400> 407

gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50
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ggctctgcgt ggccctgtcc tgcagctccg ctgctgcttt cttagtgggc 150
tcggccaagc ctgtggccca gcctgtcgct gcgctggagt cggcggcgga 200
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tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350
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ctggagcatc tacacctgag gacaagacgc tgcccaccgc cgagggctga 450
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ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
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<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys
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Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala
				20					25					30
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly
				35					40					45
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu
				50					55					60
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser
				65					70					75

Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
80 85 90

Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
95 100

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

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aagggaggca ctcccttgcc tccgcagccg atcacatgaa ggtggtgcc 100
agtctcctgc tctccgtcct cctggcacag gtgtggctgg taccggctt 150
ggccccagc cctcagtcgc cagagacccc agccccctcag aaccagacca 200
gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
agcgaggaga aggccgtga ggaagagaaa gcctggctga tggccagcag 300
gcagcagctt gccaaggaga cttcaaatc cggattcagc ctgctgcgaa 350
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ccagatcaag agagggtcc acttgaggc cctgaagccc accaagcccg 500
ggctcctgcc ttcctctttt aagggaactca gagagaccct ctcccgcaac 550
ctggaactgg gcctctcaca ggggagtttt gccttcattc acaaggattt 600
tgatgtcaaa gagactttct tcaatttatc caagaggtat tttgatacag 650
agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800
aagggaaatg gttgaccca tttgaccctg tcttcaccga agtcgacact 850
ttccacctgg acaagtacaa gaccattaag gtgcccatga tgtacgggtgc 900
aggcaagttt gcctccacct ttgacaagaa ttttcgttgt catgtcctca 950
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gacatggctc agaaacatga aaaccagaaa catggaagtt ttctttccga 1100
agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150

ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200
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 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtgactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850
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 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaattttt catttaatgt ttttggaaca tggttgacca tggttaactg 2000
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410

<211> 444

<212> PRT

<213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
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Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75

Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	
				80					85					90	
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	
				95					100					105	
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	
				110					115					120	
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	
				125					130					135	
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	
				140					145					150	
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	
				155					160					165	
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	
				170					175					180	
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	
				185					190					195	
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	
				200					205					210	
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn	
				215					220					225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	
				230					235					240	
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	
				245					250					255	
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	
				260					265					270	
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	
				275					280					285	
His	Val	Leu	Lys	Leu	Pro	Tyr	Gln	Gly	Asn	Ala	Thr	Met	Leu	Val	
				290					295					300	
Val	Leu	Met	Glu	Lys	Met	Gly	Asp	His	Leu	Ala	Leu	Glu	Asp	Tyr	
				305					310					315	
Leu	Thr	Thr	Asp	Leu	Val	Glu	Thr	Trp	Leu	Arg	Asn	Met	Lys	Thr	
				320					325					330	
Arg	Asn	Met	Glu	Val	Phe	Phe	Pro	Lys	Phe	Lys	Leu	Asp	Gln	Lys	
				335					340					345	
Tyr	Glu	Met	His	Glu	Leu	Leu	Arg	Gln	Met	Gly	Ile	Arg	Arg	Ile	
				350					355					360	
Phe	Ser	Pro	Phe	Ala	Asp	Leu	Ser	Glu	Leu	Ser	Ala	Thr	Gly	Arg	

365	370	375
Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val		
380	385	390
Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile		
395	400	405
Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe		
410	415	420
His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu		
425	430	435
Gly Arg Val Val Asn Pro Thr Leu Leu		
440		

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
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 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgcccg 200
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccttg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggccccca tccttcagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggccgt gtcctgagtc ccgagcccga ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaatacacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600
 aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412
 <211> 151
 <212> PRT
 <213> Homo sapiens

<400> 412
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Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
				20					25					30
Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
				35					40					45
Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
				50					55					60
Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
				65					70					75
Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
				80					85					90
Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
				95					100					105
Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
				110					115					120
Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
				125					130					135
Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
				140					145					150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggtgga ccctgggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400
ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
tgggccaaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550

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ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700
 ggactgacaa cggcccggtg atccctgtgg tctatgattt tggcgacgcc 750
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800
 gggatttggt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
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 ttctggtttt gattggagtg gatattggaac tcatgttggt tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtgggaggg aaccagacc tctctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgaactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys
				125					130					135

Asn	Pro	Gly	Tyr	Tyr	Asp	Ile	Gln	Ala	Lys	Asp	Leu	Gly	Ile	Trp	
				140					145					150	
His	Val	Pro	Asn	Lys	Ser	Pro	Met	Gln	His	Trp	Arg	Asn	Ser	Ser	
				155					160					165	
Leu	Leu	Arg	Tyr	Arg	Thr	Asp	Thr	Gly	Phe	Leu	Gln	Thr	Leu	Gly	
				170					175					180	
His	Asn	Leu	Phe	Gly	Ile	Tyr	Gln	Lys	Tyr	Pro	Val	Lys	Tyr	Gly	
				185					190					195	
Glu	Gly	Lys	Cys	Trp	Thr	Asp	Asn	Gly	Pro	Val	Ile	Pro	Val	Val	
				200					205					210	
Tyr	Asp	Phe	Gly	Asp	Ala	Gln	Lys	Thr	Ala	Ser	Tyr	Tyr	Ser	Pro	
				215					220					225	
Tyr	Gly	Gln	Arg	Glu	Phe	Thr	Ala	Gly	Phe	Val	Gln	Phe	Arg	Val	
				230					235					240	
Phe	Asn	Asn	Glu	Arg	Ala	Ala	Asn	Ala	Leu	Cys	Ala	Gly	Met	Arg	
				245					250					255	
Val	Thr	Gly	Cys	Asn	Thr	Glu	His	His	Cys	Ile	Gly	Gly	Gly	Gly	
				260					265					270	
Tyr	Phe	Pro	Glu	Ala	Ser	Pro	Gln	Gln	Cys	Gly	Asp	Phe	Ser	Gly	
				275					280					285	
Phe	Asp	Trp	Ser	Gly	Tyr	Gly	Thr	His	Val	Gly	Tyr	Ser	Ser	Ser	
				290					295					300	
Arg	Glu	Ile	Thr	Glu	Ala	Ala	Val	Leu	Leu	Phe	Tyr	Arg			
				305					310						

<210> 415

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 415

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tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcagggtg 150
ctagcgctgc tgggggcccgc ccatgaaagc gcagccatgg cggcatctgc 200
aaacatagag aattctgggc ttccacacaa ctccagtgtc aactcaacag 250
agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400

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tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450
agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500
ccacaatagt tcagtgcacat ctgctgcttc atcagtaaca atcacaacaa 550
ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
gttggtggta ttgtattaac gctgggagtt ttatctattc tttacattgg 650
atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
aacatgatgc catcatTTTaa ggaaatccat ggaccaagga tggaatacag 750
attgatgctg ccctatcaat taattttgggt ttattaatag tttaaaacaa 800
tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850
gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
tgaaataaac atctggatct tatagaccgt tcatacaatg gtttttagcaa 950
gttcatagta agacaaacaa gtcctatctt ttttttttgg ctggggtggg 1000
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tttgggtatc ttttgtagct cacataaaga acttcagtgc ttttcagagc 1150
tggatatatc ttaattacta atgccacaca gaaattatac aatcaaacta 1200
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tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

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Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala
				20				25						30
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His
				35				40						45
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser
				50				55						60
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr
				65				70						75
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys

	80		85		90
Pro Thr Ala Ala Ser Asn Thr Thr Thr		Pro Gly Met Val Ser Thr			
	95	100		105	
Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser					
	110	115		120	
Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val					
	125	130		135	
Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser Val Thr Ile					
	140	145		150	
Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys Phe Asp					
	155	160		165	
Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val Leu					
	170	175		180	
Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly					
	185	190		195	
Ile Arg Tyr Arg Thr Ile Asp Glu His Asp Ala Ile Ile					
	200	205			

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

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gcgatggcga ccctgtgggg aggccttctt cggcttggtc ccttgctcag 150
cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200
ccgccaagaa ttctgaggat gtcagatgta aatgtatctg ccctccctat 250
aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300
tgattgcctt catgttgtgg agcccatgcc tgtgcggggg cctgatgtag 350
aagcatactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400
acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450
tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500
tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600
caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650

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tccaagagca gcgaaagtct gtctttgacc ggcattgtgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
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 cagctttgaa ctagggctgg ggttggtggg gcctcttctg aaaggtctaa 1650
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<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

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Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45

Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn	50	55	60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met	65	70	75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu	80	85	90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile	95	100	105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val	110	115	120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly	125	130	135
His	Ala	Gln	Leu	Ile	Gln	Ser	Asp	Asp	Asp	Ile	Gly	Asp	His	Gln	140	145	150
Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	Ala	Arg	Ser	Arg	Ser	Arg	155	160	165
Ala	Asn	Val	Leu	Asn	Lys	Val	Glu	Tyr	Ala	Gln	Gln	Arg	Trp	Lys	170	175	180
Leu	Gln	Val	Gln	Glu	Gln	Arg	Lys	Ser	Val	Phe	Asp	Arg	His	Val	185	190	195
Val Leu Ser																	

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
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 aaaattgggc cgatttccac ctatgatgca tcatcaccag gcacctcag 200
 atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250
 tttgcaaagg ccaaaggatc aggtggaggt gctggaggag gaggtagtgg 300
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 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450
 aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500

ctgcctcctc ttcattgaggt acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgttt tgccccaaaa ttcacaacta 600
 acaaggcaga actaggactt gaacatggat cttttgggtc ttaatccagt 650
 gagtgataca attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
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 20 25 30
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45
 Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
 50 55 60
 Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
 65 70 75
 Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
 80 85 90
 Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
 95 100 105
 Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
 110 115 120
 Ile Ile Leu Ile Ile Leu His Gln
 125

<210> 421
 <211> 1630
 <212> DNA
 <213> Homo sapiens

<400> 421
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 aactcattcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
 ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
 gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
 actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300

tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggg tgaccagggg acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcgggtggta ctgcatgtgc ttccagagga 500
gccccaaagag ctcatgggtcc atgtgggtgg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatatatt 600
tcaggacggc gcgcaaagga ggagattgta tttcggttact accacaaact 650
caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
ggagtgaggg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850
ctcgaacact ggtgaccccg gcagccctga ggccctcgtt cttgggtggt 900
aatcagttgg tgatcattgt ggggaattgtc tgtgccacaa tcctgctgct 950
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000
tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050
aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100
ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150
aatcagaggg cacctacatg accatgcacc cagtttggcc ttctctgagg 1200
tcagatcgga acaactcact tgaaaaaaag tcagggtggg gaatgccaaa 1250
aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatattc 1350
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gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
aactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550
ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
gaatcagaga taaaaaccaa cccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

Met	Phe	Cys	Pro	Leu	Lys	Leu	Ile	Leu	Leu	Pro	Val	Leu	Leu	Asp	1	5	10	15
Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	20	25	30	
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	35	40	45	
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	50	55	60	
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	65	70	75	
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	80	85	90	
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	95	100	105	
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	110	115	120	
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	125	130	135	
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	140	145	150	
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	155	160	165	
Thr	Lys	Val	Glu	Trp	Ile	Phe	Ser	Gly	Arg	Arg	Ala	Lys	Glu	Glu	170	175	180	
Ile	Val	Phe	Arg	Tyr	Tyr	His	Lys	Leu	Arg	Met	Ser	Val	Glu	Tyr	185	190	195	
Ser	Gln	Ser	Trp	Gly	His	Phe	Gln	Asn	Arg	Val	Asn	Leu	Val	Gly	200	205	210	
Asp	Ile	Phe	Arg	Asn	Asp	Gly	Ser	Ile	Met	Leu	Gln	Gly	Val	Arg	215	220	225	
Glu	Ser	Asp	Gly	Gly	Asn	Tyr	Thr	Cys	Ser	Ile	His	Leu	Gly	Asn	230	235	240	
Leu	Val	Phe	Lys	Lys	Thr	Ile	Val	Leu	His	Val	Ser	Pro	Glu	Glu	245	250	255	
Pro	Arg	Thr	Leu	Val	Thr	Pro	Ala	Ala	Leu	Arg	Pro	Leu	Val	Leu	260	265	270	
Gly	Gly	Asn	Gln	Leu	Val	Ile	Ile	Val	Gly	Ile	Val	Cys	Ala	Thr	275	280	285	

Ile	Leu	Leu	Leu	Pro	Val	Leu	Ile	Leu	Ile	Val	Lys	Lys	Thr	Cys
				290					295					300
Gly	Asn	Lys	Ser	Ser	Val	Asn	Ser	Thr	Val	Leu	Val	Lys	Asn	Thr
				305					310					315
Lys	Lys	Thr	Asn	Pro	Glu	Ile	Lys	Glu	Lys	Pro	Cys	His	Phe	Glu
				320					325					330
Arg	Cys	Glu	Gly	Glu	Lys	His	Ile	Tyr	Ser	Pro	Ile	Ile	Val	Arg
				335					340					345
Glu	Val	Ile	Glu	Glu	Glu	Glu	Pro	Ser	Glu	Lys	Ser	Glu	Ala	Thr
				350					355					360
Tyr	Met	Thr	Met	His	Pro	Val	Trp	Pro	Ser	Leu	Arg	Ser	Asp	Arg
				365					370					375
Asn	Asn	Ser	Leu	Glu	Lys	Lys	Ser	Gly	Gly	Gly	Met	Pro	Lys	Thr
				380					385					390

Gln Gln Ala Phe

<210> 423
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 423
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 ccatctcaca tgggttctacc ctactaaaga caggaagatc ataaactgac 100
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 ctctgagctc agttgcagta ctcgggaagc catgcaggat gaagatggat 200
 acatcacctt aaatattaaa actcggaaac cagctctcgt ctccgttggc 250
 cctgcaccc cctcctgggtg gcgtgtgatg gctttgattc tgctgaccc 300
 gtgcgtgggg atggttgtcg ggctgggtggc tctggggatt tggctctgtca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgcac aggaactctg 400
 caacaattag caaagcgtt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaaggtc ataaatgcag cccctgtgac acaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcacia cttacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700

gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctacct 800
tctgtgagaa caaacattat ttaatgtgtg agaggaagggc tggcatgacc 850
aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900
aagggcttta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
aaaaaaaaaa aaa 963

<210> 424
<211> 229
<212> PRT
<213> Homo sapiens

<400> 424

Met	Gln	Asp	Glu	Asp	Gly	Tyr	Ile	Thr	Leu	Asn	Ile	Lys	Thr	Arg	1	5	10	15
Lys	Pro	Ala	Leu	Val	Ser	Val	Gly	Pro	Ala	Ser	Ser	Ser	Trp	Trp	20	25	30	
Arg	Val	Met	Ala	Leu	Ile	Leu	Ile	Leu	Cys	Val	Gly	Met	Val	35	40	45		
Val	Gly	Leu	Val	Ala	Leu	Gly	Ile	Trp	Ser	Val	Met	Gln	Arg	Asn	50	55	60	
Tyr	Leu	Gln	Asp	Glu	Asn	Glu	Asn	Arg	Thr	Gly	Thr	Leu	Gln	Gln	65	70	75	
Leu	Ala	Lys	Arg	Phe	Cys	Gln	Tyr	Val	Val	Lys	Gln	Ser	Glu	Leu	80	85	90	
Lys	Gly	Thr	Phe	Lys	Gly	His	Lys	Cys	Ser	Pro	Cys	Asp	Thr	Asn	95	100	105	
Trp	Arg	Tyr	Tyr	Gly	Asp	Ser	Cys	Tyr	Gly	Phe	Phe	Arg	His	Asn	110	115	120	
Leu	Thr	Trp	Glu	Glu	Ser	Lys	Gln	Tyr	Cys	Thr	Asp	Met	Asn	Ala	125	130	135	
Thr	Leu	Leu	Lys	Ile	Asp	Asn	Arg	Asn	Ile	Val	Glu	Tyr	Ile	Lys	140	145	150	
Ala	Arg	Thr	His	Leu	Ile	Arg	Trp	Val	Gly	Leu	Ser	Arg	Gln	Lys	155	160	165	
Ser	Asn	Glu	Val	Trp	Lys	Trp	Glu	Asp	Gly	Ser	Val	Ile	Ser	Glu	170	175	180	
Asn	Met	Phe	Glu	Phe	Leu	Glu	Asp	Gly	Lys	Gly	Asn	Met	Asn	Cys	185	190	195	
Ala	Tyr	Phe	His	Asn	Gly	Lys	Met	His	Pro	Thr	Phe	Cys	Glu	Asn				

	200		205		210									
Lys	His	Tyr	Leu	Met	Cys	Glu	Arg	Lys	Ala	Gly	Met	Thr	Lys	Val
			215						220					225

Asp Gln Leu Pro

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<220>
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<400> 425
 tgcagcccct gtgacacaaa ctgg 24

<210> 426
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<220>
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<400> 426
 ctgagataac cgagccatcc tcccac 26

<210> 427
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 <212> DNA
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<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
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<220>
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 ccaccaatgg cagccccacc t 21

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<220>

<223> Synthetic oligonucleotide probe

<400> 429
gactgccctc cctgcca 17

<210> 430
<211> 24
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caaaaagcct ggaagtcttc aaag 24

<210> 431
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 431
cagct_gact gcaggtgcta 20

<210> 432
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<212> DNA
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<220>
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<400> 432
cagtgagcac agcaagtgtc ct 22

<210> 433
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 433
ggccacctcc ttgagtcttc agttccct 28

<210> 434
<211> 24
<212> DNA
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<220>
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<400> 434

caactactgg ctaaagctgg tgaa 24

<210> 435
 <211> 27
 <212> DNA
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<220>
 <223> Synthetic oligonucleotide probe

<400> 435
 cctttctgta taggtgatac ccaatga 27

<210> 436
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 436
 tggccatccc taccagaggc aaaa 24

<210> 437
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 437
 ctgaagacga cgcggattac ta 22

<210> 438
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 438
 ggcagaaatg ggaggcaga 19

<210> 439
 <211> 30
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<220>
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<400> 439
 tgctctgttg gctacggctt tagtccttag 30

<210> 440

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 <400> 440
 agcagcagcc atgtagaatg aa 22

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 aatacgaaca gtgcacgctg at 22

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 <210> 444
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<220>
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 <210> 446
 <211> 24
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 <400> 446
 caggatacag tgggaatctt gaga 24

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 <220>
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 <400> 448
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 <210> 449
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 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 449
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 <210> 450
 <211> 19
 <212> DNA
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 <220>
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<400> 450
 tgcgtacgtg tgccttcag 19

<210> 451
 <211> 24
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<220>
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<400> 451
 cagcacccca ggcagtctgt gtgt 24

<210> 452
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 452
 aacgtgctac acgaccagtg tact 24

<210> 453
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<220>
 <223> Synthetic oligonucleotide probe

<400> 453
 cacagcatat tcagatgact aaatcca 27

<210> 454
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 454
 ttgttttagtt ctccaccgtg tctccacaga a 31

<210> 455
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<220>
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<400> 455
 tgtcagaatg caacctggct t 21

<210> 456
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 tgatgtgcct ggctcagaac 20

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 <220>
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 <400> 457
 tgcacctaga tgtccccagc accc 24

 <210> 458
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 <400> 458
 aagatgcgcc aggtttotta 20

 <210> 459
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 ctctgtacg gtctgctcac ttat 24

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 <400> 460
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 <210> 461
 <211> 29
 <212> DNA

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 <400> 461
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 <210> 462
 <211> 27
 <212> DNA
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 <400> 462
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 <210> 463
 <211> 37
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 463
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 <210> 464
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 <220>
 <223> Synthetic oligonucleotide probe

 <400> 464
 gtgctgccca caattcatga 20

 <210> 465
 <211> 26
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 <220>
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 <400> 465
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 <210> 466
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> Synthetic oligonucleotide probe

<400> 466
actctctgca cccacagtc accactatct c 31

<210> 467
<211> 22
<212> DNA
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<220>
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<400> 467
ctgaggaacc agccatgtct ct 22

<210> 468
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<400> 468
gaccagatgc aggtacagga tga 23

<210> 469
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<220>
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<400> 469
ctgccccttc agtgatgcca acctt 25

<210> 470
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<220>
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<400> 470
gggtggaggc tcactgagta ga 22

<210> 471
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<400> 471

caatacaggt aatgaaactc tgcttctt 28

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<400> 472
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<210> 473
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<220>
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<210> 474
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<220>
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<400> 474
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<210> 475
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<220>
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<400> 475
 accgcctacc gctgtgcca 20

<210> 476
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<210> 477

<211> 24
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 tagacaggga ccatggcccg ca 22

 <210> 479
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 <220>
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 <210> 480
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 <400> 481
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 <210> 482
 <211> 24
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<220>
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 <400> 482
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 <210> 483
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 <210> 484
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 <212> DNA
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 <210> 485
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 <210> 486
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 <210> 487
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 <212> DNA
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<400> 487
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<210> 488
 <211> 20
 <212> DNA
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 atagaggggt cccagaagtg 20

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<400> 489
 cagggccttc agggccttca c 21

<210> 490
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<220>
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<400> 490
 gctcagccaa acactgtca 19

<210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 491
 ggggccctga cagtgtt 17

<210> 492
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 492
 ctgagccgag actggagcat ctacac 26

<210> 493
 <211> 17
 <212> DNA
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<220>
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<400> 493
 gtgggcagcg tcttgtc 17

<210> 494
 <211> 1231
 <212> DNA
 <213> Homo Sapien

<400> 494
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 ccgcgatccc ggccccggggc tgtggcgtcg actccgaccc aggcagccag 100
 cagcccgcgc gggagccgga ccgccgccgg aggagctcgg acggcatgct 150
 gagccccctc ctttgctgaa gcccagatgc ggagaagccc gggcaaaccg 200
 aggctaagga gaccaaagcg gcgaagtgcg gagacagcgg acaagcagcg 250
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 tggtggtggg cgtcgtggcc atggcggcgg ctatcgccag ctgctcatc 350
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 agaccagagc ctacagcttaa gggatatagt accaagctat acagccgaca 550
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<210> 495

<211> 245

<212> PRT

<213> Homo Sapien

<400> 495

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Pro	Ser	Lys	Gly	Lys	Thr	Ser	Cys	Asp	Lys	Asn	Lys	Leu	Asn	Val	35	40	45	
Phe	Ser	Arg	Val	Lys	Leu	Phe	Gly	Ser	Lys	Lys	Arg	Arg	Arg	Arg	50	55	60	
Arg	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	Tyr	Ser	65	70	75	
Arg	Gln	Gly	Tyr	His	Leu	Gln	Leu	Gln	Ala	Asp	Gly	Thr	Ile	Asp	80	85	90	
Gly	Thr	Lys	Asp	Glu	Asp	Ser	Thr	Tyr	Thr	Leu	Phe	Asn	Leu	Ile	95	100	105	
Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Gln	Thr	Lys	110	115	120	
Leu	Tyr	Leu	Ala	Met	Asn	Ser	Glu	Gly	Tyr	Leu	Tyr	Thr	Ser	Glu	125	130	135	
Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	Glu	Asn	140	145	150	
Tyr	Tyr	Val	Thr	Tyr	Ser	Ser	Met	Ile	Tyr	Arg	Gln	Gln	Gln	Ser	155	160	165	
Gly	Arg	Gly	Trp	Tyr	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Glu	Ile	Met	170	175	180	
Lys	Gly	Asn	His	Val	Lys	Lys	Asn	Lys	Pro	Ala	Ala	His	Phe	Leu	185	190	195	
Pro	Lys	Pro	Leu	Lys	Val	Ala	Met	Tyr	Lys	Glu	Pro	Ser	Leu	His	200	205	210	
Asp	Leu	Thr	Glu	Phe	Ser	Arg	Ser	Gly	Ser	Gly	Thr	Pro	Thr	Lys	215	220	225	

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His Asn Glu Ser Thr
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<211> 1471
<212> DNA
<213> Homo Sapien

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<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

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Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile	35	40	45	
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro	50	55	60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	65	70	75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser	80	85	90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn	95	100	105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys	110	115	120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser	125	130	135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe	140	145	150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg	155	160	165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln	170	175	180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His	185	190	195	

Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
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Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro
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<210> 498

<211> 744

<212> DNA

<213> Homo Sapien

<400> 498

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<210> 499

<211> 247

<212> PRT

<213> Homo Sapien

<400> 499

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 35 40 45
 Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg

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				65					70					75					
Tyr	Cys	Arg	Gln	Gly	Tyr	Tyr	Leu	Gln	Met	His	Pro	Asp	Gly	Ala					
				80					85					90					
Leu	Asp	Gly	Thr	Lys	Asp	Asp	Ser	Thr	Asn	Ser	Thr	Leu	Phe	Asn					
				95					100					105					
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Lys					
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Thr	Gly	Leu	Tyr	Ile	Ala	Met	Asn	Gly	Glu	Gly	Tyr	Leu	Tyr	Pro					
				125					130					135					
Ser	Glu	Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe					
				140					145					150					
Glu	Asn	Tyr	Tyr	Val	Ile	Tyr	Ser	Ser	Met	Leu	Tyr	Arg	Gln	Gln					
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Glu	Ser	Gly	Arg	Ala	Trp	Phe	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Gln					
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Ala	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Pro	Ala	Ala	His					
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Ser	Lys	Ser	Thr	Ser	Ala	Ser	Ala	Ile	Met	Asn	Gly	Gly	Lys	Pro					
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 <211> 2906
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 <213> Homo Sapien

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<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
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Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile
80					85					90				
Ile	Lys	Val	Asn	Ser	Phe	Lys	His	Leu	Arg	His	Leu	Glu	Ile	Leu
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Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	
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<210> 502

<211> 2458

<212> DNA

<213> Homo Sapien

<400> 502

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<210> 503

<211> 373

<212> PRT
 <213> Homo Sapien

<400> 503

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Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Lys	Asp
				35					40					45
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly	Asn	Gln
				50					55					60
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn	Leu
				65					70					75
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe	Leu
				80					85					90
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Ser	Asp
				95					100					105
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr	Val
				110					115					120
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys	Pro
				125					130					135
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu	Thr
				140					145					150
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr	Tyr
				155					160					165
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu	Pro
				170					175					180
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu
				185					190					195
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala
				200					205					210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val
				215					220					225
Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly
				230					235					240
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu
				245					250					255
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro
				260					265					270

Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val	
				275					280					285	
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly	
				290					295					300	
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln	
				305					310					315	
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr	
				320					325					330	
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro	
				335					340					345	
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro	
				350					355					360	
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val			
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<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
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 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttacgct tagtcccgaa gaccaggagc cgctggacat cgagtggctg 250
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 tggagacaaa atttatgatg actactatcc agatctgaaa ggccgagtac 350
 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400
 aatttacaac tgtcagatat tggcacatat cagtgcaaag tgaaaaaagc 450
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<210> 505
 <211> 352
 <212> PRT
 <213> Homo Sapien

<400> 505
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 35 40 45
 Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
 50 55 60
 Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
 65 70 75
 Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
 80 85 90

Val	His	Phe	Thr	Ser	Asn	Asp	Leu	Lys	Ser	Gly	Asp	Ala	Ser	Ile	
				95					100					105	
Asn	Val	Thr	Asn	Leu	Gln	Leu	Ser	Asp	Ile	Gly	Thr	Tyr	Gln	Cys	
				110					115					120	
Lys	Val	Lys	Lys	Ala	Pro	Gly	Val	Ala	Asn	Lys	Lys	Ile	His	Leu	
				125					130					135	
Val	Val	Leu	Val	Lys	Pro	Ser	Gly	Ala	Arg	Cys	Tyr	Val	Asp	Gly	
				140					145					150	
Ser	Glu	Glu	Ile	Gly	Ser	Asp	Phe	Lys	Ile	Lys	Cys	Glu	Pro	Lys	
				155					160					165	
Glu	Gly	Ser	Leu	Pro	Leu	Gln	Tyr	Glu	Trp	Gln	Lys	Leu	Ser	Asp	
				170					175					180	
Ser	Gln	Lys	Met	Pro	Thr	Ser	Trp	Leu	Ala	Glu	Met	Thr	Ser	Ser	
				185					190					195	
Val	Ile	Ser	Val	Lys	Asn	Ala	Ser	Ser	Glu	Tyr	Ser	Gly	Thr	Tyr	
				200					205					210	
Ser	Cys	Thr	Val	Arg	Asn	Arg	Val	Gly	Ser	Asp	Gln	Cys	Leu	Leu	
				215					220					225	
Arg	Leu	Asn	Val	Val	Pro	Pro	Ser	Asn	Lys	Ala	Gly	Leu	Ile	Ala	
				230					235					240	
Gly	Ala	Ile	Ile	Gly	Thr	Leu	Leu	Ala	Leu	Ala	Leu	Ile	Gly	Leu	
				245					250					255	
Ile	Ile	Phe	Cys	Cys	Arg	Lys	Lys	Arg	Arg	Glu	Glu	Lys	Tyr	Glu	
				260					265					270	
Lys	Glu	Val	His	His	Asp	Ile	Arg	Glu	Asp	Val	Pro	Pro	Pro	Lys	
				275					280					285	
Ser	Arg	Thr	Ser	Thr	Ala	Arg	Ser	Tyr	Ile	Gly	Ser	Asn	His	Ser	
				290					295					300	
Ser	Leu	Gly	Ser	Met	Ser	Pro	Ser	Asn	Met	Glu	Gly	Tyr	Ser	Lys	
				305					310					315	
Thr	Gln	Tyr	Asn	Gln	Val	Pro	Ser	Glu	Asp	Phe	Glu	Arg	Thr	Pro	
				320					325					330	
Gln	Ser	Pro	Thr	Leu	Pro	Pro	Ala	Lys	Phe	Lys	Tyr	Pro	Tyr	Lys	
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<210> 506
 <211> 1705
 <212> DNA
 <213> Homo Sapien

<400> 506

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 aaaaa 1705

<210> 507
 <211> 206
 <212> PRT
 <213> Homo Sapien

<400> 507
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 Pro Phe Cys Pro Pro Leu Leu Ala Thr Ala Ser Gln Met Gln Met
 20 25 30
 Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln
 35 40 45
 Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln
 50 55 60
 Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala
 65 70 75
 Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg
 80 85 90
 Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser
 95 100 105
 Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val
 110 115 120
 Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys
 125 130 135
 Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln
 140 145 150
 Leu Gln Pro Ser Gln Glu Asn Glu Met Phe Ser Ile Arg Asp Ser
 155 160 165
 Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu
 170 175 180
 Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile
 185 190 195
 Leu Leu Thr Trp Met Gln Lys Phe Tyr Lys Leu

<210> 508
 <211> 924
 <212> DNA
 <213> Homo Sapien

<400> 508
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<210> 509
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 509
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 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30

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	35	40 45
Arg Ala Ile Gln	Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu	
	50	55 60
Ser Thr Leu Glu	Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys	
	65	70 75
Cys Val Thr Lys	Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe	
	80	85 90
Lys Asp His Gln	Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser	
	95	100 105
Ser Ile Ala Asn	Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln	
	110	115 120
Cys Gln Glu Gln	Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn	
	125	130 135
Ala Thr Arg Val	Ile His Asp Asn Tyr Asp Gln Leu Glu Val His	
	140	145 150
Ala Ala Ala Ile	Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala	
	155	160 165
Trp Ile Asn Lys	Asn His Glu Val Met Phe Ser Ala	
	170	175

<210> 510
 <211> 996
 <212> DNA
 <213> Homo Sapien

<400> 510
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<210> 511

<211> 251

<212> PRT

<213> Homo Sapien

<400> 511

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Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	35	40	45	
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	50	55	60	
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	65	70	75	
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	80	85	90	
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	95	100	105	
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	110	115	120	
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	125	130	135	
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	140	145	150	
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	155	160	165	
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser				

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Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro					
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Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu					
	200		205		210
Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly					
	215		220		225
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Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile					
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<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

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<210> 513

<211> 482

<212> PRT

<213> Homo Sapien

<400> 513

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				20					25					30

Arg	Ala	Asp	Thr	Ala	Met	Thr	Thr	Asp	Asp	Thr	Glu	Val	Pro	Ala		35	40	45
Met	Thr	Leu	Ala	Pro	Gly	His	Ala	Ala	Leu	Glu	Thr	Gln	Thr	Leu		50	55	60
Ser	Ala	Glu	Thr	Ser	Ser	Arg	Ala	Ser	Thr	Pro	Ala	Gly	Pro	Ile		65	70	75
Pro	Glu	Ala	Glu	Thr	Arg	Gly	Ala	Lys	Arg	Ile	Ser	Pro	Ala	Arg		80	85	90
Glu	Thr	Arg	Ser	Phe	Thr	Lys	Thr	Ser	Pro	Asn	Phe	Met	Val	Leu		95	100	105
Ile	Ala	Thr	Ser	Val	Glu	Thr	Ser	Ala	Ala	Ser	Gly	Ser	Pro	Glu		110	115	120
Gly	Ala	Gly	Met	Thr	Thr	Val	Gln	Thr	Ile	Thr	Gly	Ser	Asp	Pro		125	130	135
Glu	Glu	Ala	Ile	Phe	Asp	Thr	Leu	Cys	Thr	Asp	Asp	Ser	Ser	Glu		140	145	150
Glu	Ala	Lys	Thr	Leu	Thr	Met	Asp	Ile	Leu	Thr	Leu	Ala	His	Thr		155	160	165
Ser	Thr	Glu	Ala	Lys	Gly	Leu	Ser	Ser	Glu	Ser	Ser	Ala	Ser	Ser		170	175	180
Asp	Gly	Pro	His	Pro	Val	Ile	Thr	Pro	Ser	Arg	Ala	Ser	Glu	Ser		185	190	195
Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile	Thr	Pro	Ser	Arg		200	205	210
Ala	Ser	Glu	Ser	Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile		215	220	225
Thr	Pro	Ser	Trp	Ser	Pro	Gly	Ser	Asp	Val	Thr	Leu	Leu	Ala	Glu		230	235	240
Ala	Leu	Val	Thr	Val	Thr	Asn	Ile	Glu	Val	Ile	Asn	Cys	Ser	Ile		245	250	255
Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp		260	265	270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser		275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile		290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr		305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro				

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Thr Leu Ser Gly	Ala Leu Val Thr Val	Ser Arg Asn Pro Leu Glu
350	355	360
Glu Thr Ser Ala	Leu Ser Val Glu Thr	Pro Ser Tyr Val Lys Val
365	370	375
Ser Gly Ala Ala	Pro Val Ser Ile Glu	Ala Gly Ser Ala Val Gly
380	385	390
Lys Thr Thr Ser	Phe Ala Gly Ser Ser	Ala Ser Ser Tyr Ser Pro
395	400	405
Ser Glu Ala Ala	Leu Lys Asn Phe Thr	Pro Ser Glu Thr Pro Thr
410	415	420
Met Asp Ile Ala	Thr Lys Gly Pro Phe	Pro Thr Ser Arg Asp Pro
425	430	435
Leu Pro Ser Val	Pro Pro Thr Thr Thr	Asn Ser Ser Arg Gly Thr
440	445	450
Asn Ser Thr Leu	Ala Lys Ile Thr Thr	Ser Ala Lys Thr Thr Met
455	460	465
Lys Pro Gln Gln	Pro Arg Pro Arg Leu	Pro Gly Arg Gly Arg Pro
470	475	480

Gln Thr

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

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<210> 515
 <211> 431
 <212> PRT
 <213> Homo Sapien

<400> 515

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				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170					175					180

His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu	185	190	195
Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	200	205	210
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	215	220	225
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	230	235	240
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Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	260	265	270
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	275	280	285
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	290	295	300
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	305	310	315
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Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	335	340	345
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	350	355	360
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Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	380	385	390
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	395	400	405
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	410	415	420
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<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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<210> 517

<211> 332

<212> PRT

<213> Homo Sapien

<400> 517

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				20					25					30	
Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp	
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Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr	Met	
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Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	
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Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	
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Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	
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Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	
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Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	
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Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	
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Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	
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Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	
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Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	
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Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	
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Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	
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Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	
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Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	
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Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln
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Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys
				290					295					300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro
				305					310					315
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val
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